


M. Glouberman

Descartes:
The Probable and
the Certain

ELEMENTA

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M. Glouberman — Descartes: The Probable and the Certain

ELEMENTA

Schriften zur Philosophie und
ihrer Problemgeschichte

herausgegeben von

Rudolph Berlinger und
Wiebke Schrader

Band XLI — 1986

K & N

Rodopi

1986

**DESCARTES:
THE PROBABLE AND THE CERTAIN**

by

M. Glouberman

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Glouberman, M:

Descartes: the probable and the certain / by
M. Glouberman. — Würzburg : Königshausen und
Neumann ; Amsterdam : Rodopi, 1986.

(Elementa ; Bd. 41)

ISBN 3-88479-700-X

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Printed in the Netherlands

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Acknowledgements

This study was written during the academic year 1980-1, while I was visiting at McGill University in Montreal. I am very pleased to have the opportunity to record my gratitude to Professor Alastair McKinnon and to all those associated with the McGill Philosophy Department for their warmth and hospitality. Thanks also to Dr. Sholom Glouberman, to Mr. Forrest Lunn, and to Dr. Haim Marantz, for aid and encouragement. Professor Yoram Neumann, Dean of the Faculty of Humanities and Social Sciences, Ben-Gurion University of the Negev, expedited a generous grant to assist publication; I am grateful to him, and to the Faculty Research Committee. To Hava, my wife, I am indebted most of all: for affording me the time to pursue these researches, and for much else.

The book is dedicated to my father, Issie Glouberman, and to the memory of my mother, Shari Goldstein Glouberman.

System of References

To keep footnotes to a minimum, references to classical sources are incorporated into the body of the narrative, normally in the following form. Prior to a slash, '/', the passage quoted is located by means of the finest locational information (chapter, part, etc.) provided in the original work, the work itself being signified, generally, by a short name. After the slash the corresponding pagination in the editions listed below is supplied. (I list only works in languages other than English. The translations in the mentioned editions are used throughout.) The normal form is varied when appropriate, e.g. when a work from which a passage is taken, and/or its location, is noted independently; also, post-slash data are occasionally omitted, and the slash suppressed, where pre-slash data suffice. An 'ibid.' traces back to the nearest corresponding fuller reference.

DESCARTES. Save for dated letters, all references are to *The Philosophical Works of Descartes*, Volumes I and II, translated by E.S. Haldane and G.R.T. Ross (Cambridge: Cambridge University Press, 1931, 1934). It will obviate the need to mention the relevant volume after the slash to state here that all quotations are from the first other than those from the *Objections, Replies, Arguments Drawn up in Geometrical Fashion*, the Letter to Clerselier concerning *Objections* 5, and the Letter to Dinet. In quoting from Descartes' correspondence, I make use of *Descartes: Philosophical Letters*, translated and edited by A. Kenny (Oxford: Clarendon Press, 1970).

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(Indianapolis and New York: Bobbs-Merrill, 1956). *Critique of Judgement*, translated by J.H. Bernard (New York: Hafner Publishing Company, 1972). Other quotations are from *Kant: Selected Pre-Critical Writings*, translated by G.B. Kerferd and D.E. Walford (Manchester: Manchester University Press, 1968).

Introductory Preface

On Interpreting Descartes

A shopper selects 3 apples from the barrel. '3 apples, 4 cents each', says the grocer, 'you owe 15 cents'. While the shopper will immediately react by complaining that he is being bilked, and flatly refuse to pay more than 12 cents, various explanations which justify the requested sum are possible. The total is right if apples actually cost 5 cents apiece. And if a 25 per cent tax applies to produce, again the total is correct.

As with the shopper, so, almost invariably, with the reader of Descartes' texts. Upon initial encounter, dissatisfaction is felt with key items of Cartesian merchandise, e.g. the dualist thesis — minds and bodies are really distinct — on which I will concentrate these prefatory remarks. Typically, Descartes' manifest reasoning is deemed not to justify his conclusion. Consequently, just as the shopper initially refuses to foot the bill, so Descartes' reader, contending that the strongest warranted conclusion falls short of the one for which assent is requested, declares himself an opponent.

Defensive moves are normally made. Along the lines of the first justification of the grocer, the texts may be scrutinised for additional materials which underwrite suitable adjustments to Descartes' stated premises. Alternatively, along the lines of the second justification, additional premises on which Descartes is implicitly relying may be framed. Cartesian sympathisers will then argue that the alterations suffice for reconstructing a position at least as appealing as anything advertised by the competition, while Descartes' detractors will stay on the offensive by insisting that rejecting the additions is a more reasonable course overall than accepting the conclusion.

There is however a further defensive possibility here. Return to the illustrative case. On the assumption that the grocer's arithmetical system is septimal, not decimal — in which event his 10 is our 7 —

then the product of 3 and 4 is indeed 15. Should we make the assumption (and its correctness could be confirmed by observing other transactions) order is restored without need for resort to problematic supplementation. A corresponding assumption in the Cartesian case, while of course altering our understanding of the texts drastically, would also obviate the need for additions of the preceding kinds.

Given a putative discrepancy between reasoning and results, two broad interpretational strategies are in sum available. An interpreter who grants that the discrepancy is genuine is compelled to make defensive moves which involve transcending the manifest content of the texts. But an interpreter might also query the perception of a lack of fit. To be sure, even should the latter course be chosen, it still remains possible that the reasoning will have to be evaluated as flawed. Now however, the negative verdict will take on an entirely different character. It is one thing to accuse a philosopher of failing to establish a conclusion he asserts, or of establishing it only relative to additional and independently problematic premises; it is quite another thing to level the charge that he fails to establish a conclusion which he doesn't aim to make out.

The present view of Descartes is informed by the second interpretational strategy. Since the first strategy holds sway among those who work within my own tradition of Cartesian commentary — the English, analytic, tradition — I shall be showing that these interpreters systematically misrepresent Descartes' position: unwittingly, they lay a charge of the latter kind. When the dust settles Descartes' reasoning remains discrepant with his dualist conclusion. But the actual discrepancy and the one normally imputed aren't the same.

What in the Cartesian case corresponds to the distinction between arithmetics? A distinction between a broadly Aristotelian categorial system and a broadly Platonic one.

A reader who approaches the texts equipped with the following paradigm of a real distinction — the distinction between the particular table before me and the particular chair on which I am seated — won't be able to make correct sense of Descartes' reasoning. The

upcoming feature of the reasoning signals from afar that this Aristotelian paradigm is out of joint with root Cartesian metaphysical tenets.

It is possible according to Descartes to infer the real distinctness of minds and bodies from the fact that the two principal attributes, mentality and extension, have nothing in common: 'when I examine the nature of body I find nothing at all in it that savours of thought' (*Replies* 4/102); 'there is no better proof of the distinctness of two things than if...we find nothing in the one that does not differ from what we find in the other' (*ibid./ibid.*). Compatibly with the numerical distinctness of the table and the chair, there are however more than a few properties simultaneously ascribable to both: both have weight, are coloured, both have shapes, occupy place, and so on. In a broadly Aristotelian frame, in fact, all the properties of items of one type might also belong to the numerically distinct items of another, providing the latter items possess some additional properties; indeed, if the common properties are differently disposed *per genus et differentiam*, couldn't the overlap be reciprocal? The moral is obvious. Real distinctness would never be defined by one of a broadly Aristotelian persuasion so as to preclude shared properties. If — to apply the moral to the case at hand — such a one were to subject 'mental thing' and 'material thing' to the constraint, that might well ensure that no item presented for comment will qualify either as mental or as corporeal. Similarly, the introduction of a distinction between essential and accidental property-possession is unlikely to lend a helping hand here. That the interpreters I oppose are inadequately sensitive to these difficulties illustrates the depth of their own domestic commitment to an Aristotelian conception of things. The conception may be philosophically defensible. But if I am right about the Cartesian situation, it is clear that unless the influence of the commitment is neutralised, it will have an insidious effect in the exegetical frame.

Immediately what I have said about a categorial difference is taken to heart, the following question virtually poses itself. If Descartes' reasoning, definitively reconstituted, doesn't in fact aim at the conclusion that minds and bodies are distinct as per the Aristotelian

paradigm, what influence will the Cartesian dualist thesis have on us, even supposing it to be the irresistible product of that reasoning? Should our home conception of a real distinction differ in root character, or categorially, from the homonymous Cartesian conception, won't the proof of a Cartesian real distinction become effectively severed from the proof of a real distinction for us?

So excellent is the question that our inability to find a direct Cartesian answer might already be regarded as a compelling counter even to the presumptive credibility of my reading, be as may be its local interpretative triumphs. But the omission can be explained. Why does the question strike *us* with such force? It does so because *we* aren't firmly committed to the Cartesian categorial system. Descartes, since he is himself needless to say an avid exponent of that system, plainly would have been less impressed.

The explanation, in this state, doesn't quite do the trick. Descartes, we know, is a fully self-conscious revolutionary — a rather jealous one at that: 'the solution of no one question has ever been given by the aid of the principles of the [non-Cartesian] philosophy' (Letter to Dinet/359). Descartes recognises that he has philosophical opponents in whose minds the question is more than likely to have arisen; so his personal conviction doesn't satisfactorily explain the omission. But this remaining weakness may be repaired by underlining passages like the ones quoted earlier from *Replies* 4. These passages justify attributing to Descartes the belief that the real distinction he defends is stronger than any distinction of the kind homonymously labelled by those opponents. Evidently, a holder of such a belief would have felt no pressure to answer the question directly.

While explaining, consistently with my line of interpretation, why Descartes doesn't address the question directly, the foregoing remarks also indicate that he does supply an answer indirectly. If the belief attributed to Descartes isn't embraced dogmatically, he will subscribe to it consequent upon subscription to more basic views about the relations between Cartesian and non-Cartesian categories. Obviously, the characterisation of these views as 'more basic' implies that the content of the mentioned belief can be deduced (or otherwise

extracted in a philosophically appropriate fashion) from them. It is thus in defending the more basic views that Descartes would in fact be supplying the raw materials for constructing a direct answer.

Where does Descartes work out the more basic views? I have spoken of an Aristotelian categorial system and a Platonic one; Descartes speaks of 'the probable' and 'the certain'. Descartes' treatment of the relations between the systems is therefore constituted by his treatment of the relations between the inadequate or 'probable' conception of things he is attempting to surpass — the 'unclear and indistinct' conception in which he regards all of us as pre-meditatively enmired — and the adequate or 'certain' conception by means of which he proposes to supplant the former — the 'clear and distinct' conception achieved by the Cartesian scientist.

To establish that the various well-known Cartesian distinctions — between the probable and the certain; between the unclear and indistinct, on the one hand, and the clear and distinct, on the other — are genuinely explicable in terms of the distinction between the two categorial systems, constitutes the basic constructive project of the essay.

Reconsider now the belief attributed to Descartes about the relative strengths of the real distinction for which he argues and of a distinction which would be accounted real by a proponent of non-Cartesian categories. It may reasonably be supposed that distinctions made within a single and unified categorial system can be ranked pairwise in strength. Thus, Cartesian real distinctions — *distinctiones realis* — are stronger than modal distinctions — *distinctiones modalis* — and both exceed distinctions of reason — *distinctiones rationis* — in strength. However, because the ranking in the present instance vaults the categorial divide, its intelligibility cannot so readily be granted. By possible analogy, while one man can of course be described as stronger than another, he can scarcely be characterised literally as stronger than any argument or smell. Even if Descartes' reasoning for dualism, which unfolds within the confines of the Cartesian categorial system, is impeccable in its own terms, it cannot therefore be concluded with assurance that the result has the critical implications Descartes thinks it to have for what he stigmatises as the

'inadequate' conception of minds and bodies. Crudely put, Descartes is under an additional obligation to show that the content of the 'inadequate' conception of things can be incorporated without substantive residue into the content of the 'adequate' one; or, exploit another form the distinction takes, to show that what we are 'unclear' about is the same as that which is presented 'clearly' by the Cartesian scientist. A basic critical theme of the essay is that Descartes cannot discharge the obligation here. The analogy of the shopper is importantly disanalogous in this respect. While the septimal system of calculation can be mapped onto the decimal, no comparable mapping of Aristotelian onto Platonic categories is possible. In a favoured formulation of mine: the probable conception of things is *autonomous* of the certain conception; it is no minor variant thereof. One of Descartes' major errors consists in underestimating the yawning chasm separating them.

The claim that Descartes mistakes the relations between a probable and a certain conception suggests that he makes sense of both. But though Descartes' failure to subordinate the probable to the certain isn't the same as, in the event it goes along with, a failure to make sense of the latter. As this implies, there is a negative component of Cartesian thought and a distinct, positive, one, the first comprising Descartes' criticisms of our standard, sense-involving, view of things, the second his account of what an adequate conception includes. These are distinct because the intelligibility of the conceptual content of the criticisms doesn't presuppose the Platonic categorial system's intelligibility, while that of the conceptual content of the account does presuppose this. A third basic project of the essay, complementing the first, is to pick apart the two components, and to show in the process that Descartes' negative results survive his failure on the positive side — remaining analytically viable even today.

Having stated that my disaffection with received analytic commentary goes deep, it is apposite to continue with a few observations on the methods employed to make the case.

It is a triviality about the problem of interpreting a distant philosophical *oeuvre* that it would be rash to assume that the words

used by a philosopher under study have the same meanings as we, several centuries later, unreflectively attach to them, the more rash because we are all acutely aware that the same problem dogs our efforts to understand even our own contemporaries. How very rash it would be in the Cartesian context has been made amply clear by what I have said in criticism of analytic commentary. Under these conditions, it is obviously unwise to begin by directly considering large chunks of text, attempting to reformulate, animated by a latter-day mania for logical rigour, the arguments they contain.

A natural step under these conditions consists in trying to establish, firstly on a syntactic plane, how central terms in the philosopher's lexicon interrelate. Various semantic or conceptual fields may thereby emerge having no echo or counterpart in our unreflective thought and speech. This will be one of my chief modes of treatment — and it lends to the book what I think is a certain distinctive flavour. By collecting small pieces of text — fragments of argument — from across the *corpus*, we shall come to see that the terms 'certainty', 'action', and 'truth', which lack any close linkage in our philosophical lexicon, are intimately intertwined for Descartes. This is a sign of some deeper difference, relevant to the explanation and evaluation of Descartes' arguments; in the event, it will be found to signal that Cartesian categories differ from those which inform our mundane thinking. (I should add here that although analytic interpreters of Descartes serve as my foil, very little will be found in the way of direct engagement with the vast literature they have created. Since, if I am right about the categories, these interpreters mistakenly assume that Cartesian texts are amenable to fairly straight transcription into contemporary terms — and hence that linkages like the one mentioned are conceptually nugatory — direct debate would put the cart before the horse. I do not mean to suggest that there isn't a cart here. But the horse must be treated first.)

In one respect, Descartes' anti-Aristotelianism is no esoteric fact: all of us know that the scientific revolution in which he played a central part subverts a broadly Aristotelian conception of things. It may therefore be complained that I make needlessly heavy weather of the categorial distinction. My response is two-pronged. First, it isn't

so obvious that the non-esoteric fact, which primarily concerns science, carries a clear philosophical message. Second, if the fact is a sufficient sign of the difference, analytic interpreters have in the event shown themselves singularly impervious to its significance.

Another natural step in aid of accurate understanding is to work oneself, so far as possible, into the frame of mind of the principal by probing his relations with other philosophers of the age, who are somewhat less likely to construe his words anachronistically. While I do treat the various *Objections* to Descartes' *Meditations*, and show that they have the implications I have stated, my book is not a fully-armoured piece of scholarship, and I anticipate a kindred complaint against the complexities of the discussion on this score. But the following observation will explain why the effect of the frankly scholarly approach would itself be less than decisive.

Scholars of the historical literature have not failed to note that the Aristotelianism against which Descartes was reacting — usually dubbed 'Peripateticism' — was far from a pure exemplification of the position of the Stagirite. It was, rather, an often eclectic and bastardised version of the Stagirite's stand, filtered through the special preoccupations of its scholastic inheritors. And the same holds true, *mutatis mutandis*, for Platonism. While one does not therefore have to look far to find a scholar stating that the views of the Peripatetics 'were opposed to Cartesian doctrines',¹ the statement is so quickly hedged round with qualifications that no clear contrast remains. Thus, this scholar immediately adds that the opposition was 'in varying degrees and in various ways'. 'So impressive is the variety among them, that classifying them is a complex task'. In fact, we are even told, some among 'the seventeenth century Aristotelians... actually railed against [Aristotle]! In these circumstances, it would in any case be necessary to explain, independently of the historical texts, what the contrast comes to. And it is obvious that even the scholar, in ranging an historical principal under one rather than the other of the Aristotelian and Platonic banners, is relying on an independent

1. L.C. Rosenfield, *From Beast-Machine to Man-Machine* (New York: Octagon Books, 1968), p. 304. Quotations following: *ibid.*, pp. 304-5; *ibid.*, p. 305; *ibid.*, *ibid.*

understanding thereof. So while I do not for a moment deny that the contrast I employ for purpose of interpretation is highly schematised, I believe that only in such a form can it be used to good effect.

Although my treatment is not controlled by a scholarly knowledge of the various figures of the Cartesian era — I restrict myself almost exclusively to Descartes' own major writings, and to the *Objections* — a specific historical slant will nevertheless be increasingly felt as we go along. A decisive impetus to the interpretation I offer is imparted by Kant. While Kant's concerns aren't those of a professional historian of philosophy (though he has claims to have established the discipline), his backwards-directed perception is, I am convinced, far acuter than that of latter-day analysts. As I shall show towards the end, Kant's writings contain the categorial polarity so central to my reading. Since I take my cue from Kant, the discussion of Descartes therefore has a slightly unusual historical cast: it is drawn forward by the Kantian *terminus ad quem* rather than pushed ahead from the scholastic *terminus a quo*.

While I take sharp issue with analytic interpreters of Descartes, I operate for the most part in their terms when it comes to explaining Cartesian views. A good deal stands yet to be learned about contemporary analysis in this way — certainly about its prospects as a tool of historical enquiry; also, perhaps, about its merits as a general method of philosophising. I stated earlier that I would show Descartes' negative thinking to be receptive to analytic defense. The present point, in denigration of analytic methods as applied by the historical investigator, concerns Descartes' positive thinking. I shall illustrate how key elements of that thinking resist satisfactory analytic representation. This is an index of an historical bias in these methods. So I do not believe it to be accidental that Cartesian views are systematically mistaken by analytic discussants. Kant should serve as a tocsin here; it is both mildly paradoxical and highly flattering to Kant that the lesson that might otherwise have been learned from him is completely missed, owing to his magnificent success in converting the field to his way of thinking.² The dominant

2. 'We can only explain what "philosophical thinking about experience" is by

metaphilosophy of our age has a Kantian provenance. Post-Kantian orthodoxy places philosophy in a characteristically oblique relation to science, divesting it of the dictatorial functions attributable to a foundational discipline. But Kant didn't fail to say of his metaphilosophical revolution that it has substantive implications, which he puts by denying to man the possibility of knowledge of 'things in themselves'; nearly enough, knowledge of the only kind that Descartes regards as worthy of the title.

To make full sense of what Kant denies would impugn his metaphilosophy. Arguably, it is one and the same thing to show that the analyst is substantively committed by the very methods he employs and to show his results to be restrictedly valid at best. But this isn't to say that by showing how *Descartes'* positive reasoning resists analytic treatment one shows that there is something significant resistant to it. In consequence of my contention that Descartes doesn't make full sense of *bona fide* scientific knowledge, the negative remarks about analysis can legitimately be viewed as limited to its historical application. The real character of the historical situation (which isn't necessarily a mirror of the general philosophical situation, since other thinkers may do better than our protagonist) can be modelled neatly by calling upon the contrast between a space which is finite and bounded and a space which, though finite, is unbounded. I said a few pages back that Descartes' criticisms of mundane thought can be reconstituted, even defended, independently of his positive views concerning the nature of genuine knowledge. So while, in terms of the model, Descartes consistently writes as if our domestic space is finite because of embedment in a wider space — and so does Kant, though to a large extent for dialectical reasons, or ironically, in employing the contrast between 'appearances' and 'things in themselves' — this isn't essential to the content of

reference to the sort of thing which Kant did' (R. Rorty, *Philosophy and the Mirror of Nature* (Princeton: Princeton University Press, 1980), p. 150). The 'we' refers to the analytic collective. Since it is very much as one of the Kantian-Aristotelian 'we' that Rorty understands the thematic content of Descartes' texts, his influential thesis about the Cartesian underpinnings of contemporary epistemology needs to be reformed.

Descartes' criticisms. Descartes' negative reasoning amounts, in short, to a charting of the distinctive shape of our domestic space from within, hence without irrevocable commitment to the reality of anything else; although, obviously, the fact that Descartes frames the reasoning here negatively indicates that he himself thinks to be something real outside.

Inevitably, interpretation in whatever mode, *eo ipso* historical interpretation, to the extent that it necessarily transcends mere paraphrase, involves exaggeration. What is it to analyse a text, if not to spread apart the knotted components thereof, the better to display their 'real' interrelations? A double exaggeration will likely be charged against my central thesis. In arguing that the probable and the certain are mutually incommensurate, I sunder the two more sharply than they are sundered by Descartes himself. But like children, a philosopher's theories often move in ways their originator does not anticipate, let alone approve. This, I am convinced, is such a case. It is obvious that, in my view, Cartesianism is not what is offered in the bulk of the critical literature to which I react. Nor, more to the present point, is Cartesianism exactly what Descartes thinks it to be.

I Doubt and Certainty

'Standard' analytic Cartesian commentary (e.g. Anthony Kenny's *Descartes: A Study of His Philosophy*) is vitiated by a failure to recognise that the rejection of sense-based beliefs on the grounds of 'uncertainty' is not intended by Descartes to receive demonstrative support from the sceptical considerations of Meditation 1. It is illustrated how Descartes' argumentation would succumb to elementary criticism if this were the case, and by close examination of the use Descartes makes of the Principle of Doubt — the principle that a belief is rationally unacceptable unless it is 'entirely certain' — it is shown that he does not in fact commit the various blunders commonly charged against him. Similarly, the validity of his argumentation against mundane beliefs is not hostage to question-begging assumptions such as the assumption that science is unified.

1. Rational belief acceptance: sympathy for the *génie*

'I ought...to withhold my assent from matters which are not entirely certain' (Meditation 1/145). The principle of rational belief acceptance informing this counsel — to be referred to henceforth as *the principle of doubt* — incorporates the condition whose satisfaction has in Descartes' view to be assured in order for a subject to secure a rationally impregnable warrant for unqualified assent to a proposition entertained, viz. the condition of entire certainty. (My words are designed to remain poised as between whether the condition is one on propositions themselves, a relational condition on subjects and propositions, or whatever. A choice here must be allowed to emerge from the discussion.) By systematically applying the principle to his normal stock intellectual possessions — by a process of methodical doubt — Descartes' meditator isolates those propositions belief in which is not rationally justified. Prominent in the company are the familiar factual propositions expressing what is learned in the course of experiential contact with the world. Only when these are effectively marked off can the passage to the promised land of Cartesian science — of '*scientia*' — proceed.

We may assume on general exegetical grounds that a philosopher will devote more care to important than to marginal elements of his position. Since the principle of doubt's importance is beyond challenge, a presumption ought therefore to arise in an impartial reader against the accuracy of standard interpretations of the central Cartesian text. On these interpretations, the sceptical argumentation of the first Meditation, represented as bringing the principle to bear directly on propositions comprising the familiar sense-based conception of reality, is reconstituted as a series of mutually supporting, but severally insupportable, invalidities, not a few elementary. The *prima facie* destructive power of these readings, matched on the other side by the improbable lengths to which Descartes' champions are forced to go in order to salvage a modicum of respectability for the conclusions they agree he is drawing, tells against the characterisation, shared by friend and foe, of what Descartes thinks himself to be doing.

Less nebulous reasons exist for dissatisfaction with the well-trodden lines of Cartesian criticism and defense. If, for example, the stated condition of belief acceptance synchronised with our normal conception of the cognitive strategies characteristic of rational doxastic agency, then the remoteness of Descartes' results would render natural the expectation that his reasoning will be flawed. However, the condition embedded in the principle seems jarringly counterintuitive. Descartes seems to have permitted himself to begin by choosing a standard of rationality already disdainful of the normal constraints. But it is surely most unlikely that under these conditions his argumentation could so quickly succumb to the kind of low-level criticism often glibly advanced in introductory courses and designed to instil in the raw student a healthy scepticism about the classical greats. Would a chess master, allowed to remove his opponent's Queen at the start of the game, have to perpetrate a series of grossly illegal moves in order to retain his advantage?

Favouring Descartes with the benefit of these doubts can obviously be no more than the beginning of wisdom. While it is only prudent, even perhaps mandatory, to cast around for a line of interpretation which puts a more attractive face on Descartes' reasoning

for the rational unacceptability of standard, sense-acquired, beliefs, it would be in the nature of wishful thinking to confer the benefit on Descartes merely because of a pious desire for something better. But such a line does exist. Those who proceed in the fashion described, whether critically or defensively, unquestioningly assume that the sceptical materials of Meditation 1 are directly related to the principle of doubt. This is a mistake. To make the assumption (and I am unaware of interpreters who in one form or another avoid doing so) is to perpetuate a fundamental misunderstanding of the argumentation structure of Descartes' masterpiece.

Impressed by the fact that latter-day phenomenologists employ materials similar to those which figure in Descartes' sceptical reasoning — e.g. the difficulties of distinguishing veridical from illusory perceptual states and of distinguishing dreaming from waking experience — a critic might respond that the mistake is mine, and does not consist in assuming the direct link, but in agreeing too readily that Descartes' argumentation is defective, or, what comes to much the same thing, in holding that the only way to defend it is by ferreting out additional materials from between the lines. The familiar assaults on the elementary validity of Descartes' reasoning can be beaten back, the critic maintains, and the assumption of a direct link supported, by reading his words in a frankly phenomenalist spirit.

It cannot be denied that the interpretational accuracy of such a reading seems to be upheld by the fact that phenomenologists exploit sceptical materials similar to those of Meditation 1 in aid of a negative conclusion identical to Descartes', viz. that the commonsense picture of the deliverances of the senses is mistaken. But despite the meritorious intentions of those who take this line, the resulting position is indefensible. The quite stunning disproportion cannot be missed between the positive conclusions of the *Meditations* as a whole and the sceptical content of Meditation 1. Not only do the work's eventual results — part of a realist-rationalist *ensemble* — outrun the conclusions supported on these very sceptical grounds by phenomenologists, but positive Cartesian conclusions are even less reputable from the phenomenologist's idealist-empiricist viewpoint than the

commonsense picture which he takes the sceptical materials to impugn. For that matter, they are I daresay even less reputable, from the viewpoint of contemporary realist-empiricist critics of phenomenism, than phenomenism itself.

Faced with the disproportion, would those who suggest a phenomenalist reading of Descartes' argumentation have any comeback? In an effort to compensate for the disproportion, they might contend that the positive conclusions of the *Meditations* are sustained not only by the sceptical materials which link directly (as they hold) with the method of doubt, but also by Descartes' independent, and in Meditation 1 largely unacknowledged reliance on substantive assumptions about the nature and contents of a properly 'scientific' representation of the world. I agree that failing the impetus of (dogmatic?) supplementation here Descartes could not reach his ultimate terminus in the *Meditations*, with its mind/body abyss, its equation of matter and extension, etc. And the legitimacy of shoring up an interpretation of the position in the work by unearthing latent assumptions can never be in question. But it is evident on even a moment's reflection that the additional assumptions cited by sponsors of the phenomenalist reconstruction are spirited self-disqualifyingly into the present fray. Reasonable standards of exegetical propriety prohibit one who seriously claims to discern a parallel between Descartes' sceptical moves and familiar phenomenalist argumentation from defending the parallel in face of the disproportion by deploying materials which *go against* the parallel. The proper conclusion under these conditions must be precisely the opposite one, viz. that the sceptical argumentation isn't designed by Descartes to play a primary role in challenging the sense-based view of the world. Not that the sceptical argumentation, construed phenomenistically, fails to play such a role. Rather, the way it functions is entirely out of harmony with Descartes' purposes.

The shortcomings of the phenomenalist reconstruction lead me to join in the widespread dissatisfaction with Descartes' sceptical reasoning. Consequent upon agreeing that the reasoning isn't offered in a phenomenalist frame of mind, I see no plausible way to deflect the repeated accusation of its ineffectuality in the context of

Descartes' desire to undermine the standard experiential conception of things. This would however write *finis* to the Cartesian programme — to, more exactly, the contention that the programme is non-dogmatically executed — only if the sceptical argumentation constituted Descartes' basic support for his negative conclusion. But this last I deny.

By conceding that Cartesian *scientia* can be reached only if substantive assumptions are made by Descartes, haven't I thereby agreed that the critical results of Meditation 1 outrun its argumentation? Not at all. Meditation 1 has a predominantly negative slant, its major outcome being that the senses are an improper avenue for gaining knowledge about the world. But it is one thing to impugn the adequacy of sense-based data, quite another to affirm that a purely ratiocinative mode of world-cognition is adequate and ought therefore to supplant the sense-perceptual mode. For my interpretative purposes it is vital to recognise and scrupulously to observe the distinction here.¹ With the distinction in hand, the impending two-part Cartesian defense can be depicted more precisely. First, on the level of strict argument, Descartes' negative critique of sense-based experience is not informed (though it is undoubtedly motivated) by ultimately question-begging assumptions about knowledge and reality. Second, his core case for the negative thesis that sense-based beliefs run afoul of the principle of doubt, and hence are unacceptable to a rational subject, is innocent of the flaws invariably imputed by those who find fault with the sceptical reasoning; innocent, I repeat, because not directly based on the sceptical reasoning, and thus unaffected by those flaws.

1. The distinction induces a correlative distinction between a negative and a positive version of the principle of doubt. Negatively: the rational subject must reject a belief if it is not entirely certain. Positively: only a belief which is entirely certain is rationally acceptable. The negative formulation is preferable for two reasons. Not only does it sensitize us to the possibility that there may be no rationally acceptable beliefs in Descartes' sense, but it also instils a mindfulness of the possibility that his notion of certainty might not be unitary. By (possible) parity of reasoning, an object might be 'not blue' for different reasons, e.g. because it is red or because it is an object of a kind to which colours cannot be ascribed.

Assuming that these claims can be worked out, the question arises whether Descartes' negative evaluation of a sense-perceptual mode of contact with the world, properly understood, is capable of being sustained. The question is simply not addressed by contemporary interpreters. If I am correct, this oversight is an automatic consequence of their improper understanding of the *Meditations*' rhetorical structure. And while it would be very ambitious to answer with an unqualified affirmative, I would maintain, only a bit less ambitiously, that the issue Descartes debates remains at least a live one today. This does not however mean that Cartesianism is viable. For 'Cartesianism' names Descartes' positive theory. And it is precisely where Descartes begins to extract positive implications from his negative thesis that insuperable difficulties beset him.

2. *Where is Descartes' argument?*

The principle of doubt adumbrated at the start of the *Meditations* and the sceptical materials prominently displayed there are not two sides of a single coin presented to put paid to sense-based cognition. Contrary to the view prevalent in the interpretative literature, Descartes does not introduce these materials in order strictly, or as a matter of irresistible logic, to sustain the result that the rational agent is obliged to renounce his sense-acquired beliefs. Accordingly, the palpable ineffectiveness of the sceptical argumentation here does not therefore tell critically against the overall position, since, to repeat, this argumentation is not advanced by Descartes as the effective measure. The sceptical materials are in short *subordinated* to the principle; they do not work the principle out.

A question, the detailed answer to which can only be supplied as the discussion unfolds, is so likely to be raised right now that prudence dictates the provision of at least a stop-gap response. Plainly, the obligation Descartes pins on the rational agent to withhold assent from normal descriptive propositions about the world is a function of the principle of doubt. Suppose it is granted that Descartes does not support this putative consequence of the

principle by deploying the sceptical materials. Relative to the supposition, are we not entitled to expect that he will offer some defense of the claimed uncertainty of these propositions — defense which must be distinct from the materials? But as we peruse the opening paragraphs of the *Meditations* we are hard-pressed to find anything of the kind. Doesn't it follow that the interpretation succeeds in clearing Descartes of the usual criticisms only by stranding him with the unargued assertion that the senses are improper instruments for achieving knowledge? But between the accusation of not arguing at all and the accusation of arguing ineffectively, it's a strange cast of mind that regards a plea of guilty to the former as the more flattering to Descartes, let alone as exegetically superior.

Were the questioner's perception of the text accurate, no real advantage could be chalked up to the interpretation I propose. That perception is however a misperception. In the opening paragraphs of the *Meditations* there are in fact two lines of support for the principle of doubt neither of which makes essential use of the sceptical materials. Locating and charting these lines is a task for later. But having stated that they are there to be seen, I can be a bit more articulate on just how the sceptical materials of the first Meditation are subordinated to the principle.

Descartes' dismissive attitude towards perceptual cognition has as its core a compositionally recessive but doctrinally basic *structural* analysis of a sense-based mode of contact with the world. The sceptical argumentation plays what can therefore aptly be called a *consolidative* role, as distinct from a *demonstrative* one, and is as such subordinate to the principle. The sceptical argumentation does not in other words contribute at all to proving or demonstrating that sense-based cognition is beyond the scientific pale. Rather, as Descartes himself states, it functions to 'prepare my readers' minds' (*Replies* 3/60) for proof or demonstration by undermining the cherished assumptions of the mildly reflective commonsense thinker on their own terms, as well as to satisfy those more philosophical readers who, in the prevailing climate of debate, expect sceptical issues to be raised. The question whether Cartesian doubt is rational — whether the ra-

tional subject is indeed obliged, qua rational, to reject his normal stock of sense-based beliefs — can only be answered correctly by taking account of the *Meditations*' structural strain. Attempts to evaluate the doubt's rationality solely in terms of the sceptical materials either will lead to the conclusion that the Cartesian programme, since it requires that the doubt be rational, succeeds only by begging the question at issue, or else will result, willy-nilly, in a text-distorting overhaul of what Descartes actually says.

Now that I have distinguished between a demonstrative and a non-demonstrative strain in the negative argumentation of the first Meditation, and without denying for a moment that Descartes could have formulated his thoughts more clearly (thereby obviating the present intricacies), I am anxious to avoid being saddled with the exegetically thorny thesis that Descartes' position isn't what it seems; that, to use the language of conspiracy, the *Meditations* works to a hidden agenda. I have already noted that a reader overimpressed by the parallels between the epistemological problems agitated in the first Meditation and the sceptical-cum-phenomenalist preoccupations of mid-century philosophers of perception will almost automatically miss the distinction; will confuse consolidation for demonstration. But this says merely that Descartes' position isn't what it seems in the optic of one who is overimpressed. Only if Descartes himself were so dazzled by the parallels as to equate the two strains would the judgement be warranted that the reality of his view differs from its appearance. Evidently then, it's a question of working our way more deeply into Descartes' domestic frame of thought. Within that frame the relations emerge directly enough to block the charge either that Descartes is purposely disguising his intentions from us or that they are obscure even to him. To the extent that the argumentational structure of Meditation 1 is less clear than it might be, we shall see this to be a function at base of Descartes' failure to isolate his negative thesis from the positive picture of reality at which he is aiming; it isn't due to any irremediable confusion of the two strains.

Before moving past preliminaries, it is worth gesturing towards the abundance of collateral historical evidence which testifies against the interpretation based on the supposed parallels. For instance, while

Descartes enunciates the principle of doubt early in the *Rules* — see Rule 2 in particular — no more than a glancing reference is made here to the kinds of epistemological material present in the first Meditation. Such evidence that the method of doubt is independent of the sceptical data cannot fairly be discredited by insisting that only in the *Meditations*, where these data come into their own, is the method of doubt properly keyed to the metaphysical theses of Descartes' maturity. Anticipatory versions of these theses are there in the *Rules* for all to see. And indeed, if Descartes thought himself capable of reaching his metaphysical results without airing the sceptical problems, doesn't this by itself indicate, contrariwise, that those problems, once introduced, figure in a minor capacity? Since the *Meditations* is no mere paraphrase of the *Rules*, the question is not quite rhetorical, though we may note that when Descartes is pressed on this matter he responds by remarking that he 'felt some disgust in serving up again this stale dish' (*Replies* 2/31), which has some tendency to imply that his really sustaining argumentation is elsewhere to be found. But a similar implication also flows, this time more securely, from the fact that a marginal role is allotted to epistemological scepticism in the *Principles*, that handbook of mature Cartesian metaphysics. After a perfunctory tip of the hat, Descartes races on to a largely self-contained exposition of such substantive views as the duality of mind and body. Finally, by way of extending our reach beyond the confines of the Cartesian *corpus*, it is enlightening to note that while a philosopher like Spinoza approves Descartes' harsh rejection of the senses, *his* critical attitude is detached entirely from the issues of sense-deception, illusion, and dreaming. Examined from a structural viewpoint, Spinoza's assault on the bastion of the senses on behalf of superior brand of cognition — '*scientia intuitiva*' — follows, if anything, lines more clearly discernible in Descartes' *Rules* than in his *Meditations*.

3. *Uncertainty: truth-neutral and truth-involving*

Informally, the principle of doubt is naturally glossed as the principle that a belief should be rejected by a subject if it is uncertain. No less naturally, the sceptical materials of Meditations 1 are informally taken as designed to establish that mundane beliefs about the world are uncertain. Because of the verbal overlap here the impression is easily fostered that the sceptical materials are directly associated with the principle of doubt, comprising Descartes' *reasons* for holding that the rational subject is obliged to suspend his sense-based beliefs. It follows that if the sceptical materials aren't intended by Descartes to stand in such a relation to the principle of doubt, the notion of uncertainty directly connected with them will differ from its principle-linked homonym. Evidently, it is of paramount importance for an interpreter to recognise any equivocity which might affect the term, since considered evaluation of Descartes' challenge to the senses requires precise understanding of what he has in mind when he describes sense-based beliefs as uncertain.

Close examination bears out an hypothesis of equivocity. A distinction has to be made on Descartes' behalf between a *truth-value-involving* sense of 'uncertain' and a different, *truth-value-neutral*, sense. (For short, I will call these senses 'truth-involving' and 'truth-neutral'.) The notion of uncertainty associated with the principle of doubt is truth-involving: uncertain beliefs (also described by Descartes as 'probable') are to be rejected for the reason that they are untrue.² The weaker notion of uncertainty connected with the sceptical arguments is by contrast truth-neutral: it is compatible with the uncertainty of a belief, established by adducing these arguments, that it be true.

Normally, even a sympathetic reader has a great deal of difficulty in seeing why he should agree that the uncertainty of a belief rationally obliges its non-acceptance, since, *prima facie*, it does not strike him as in the least irrational to be guided epistemically by the

2. For reasons to be entered below I prefer 'untrue' or 'not true' to 'false'.

analogue of the principle which guides many of us judicially: 'Innocent until proven guilty'. But while it remains to prove that the term 'uncertain' is affected by the preceding equivocality, note the following quantum gain which is made if the claim of equivocality is credited. If it can be inferred from the uncertainty of a belief that what is believed is untrue, the difficulty evaporates. Whatever else the sympathetic reader may contest, he will not contest that the untruth of a belief counts as rationally compelling reason for its non-acceptance.³

I am proceeding here by addressing a received view of Descartes' position, rather than by examining his writings in an unmediated manner. So this is not the place to expound, or expand upon, the equivocality. But a couple of claims may be quoted which vouchsafe a glimpse of its textual reality. In Rule 2, Descartes states that, under the aegis of the 'maxim' of doubt, we are to 'reject all...merely probable knowledge and make it a rule to trust only what is completely known and incapable of being doubted' (/3). And a bit further on he adds that 'we cannot attain to a perfect knowledge in any...case of probable opinion' (/ibid.). I already observed that the *Rules* is largely free of those sceptical materials which dominate the landscape of Meditation 1. So, uncontroversially, these claims are primarily connected in Descartes' mind with the principle — the 'maxim' — of doubt. Consider now how the truth-neutral grammar of 'uncertain' is violated in the quoted lines. Normally, it is compatible with describing one of a subject's beliefs as uncertain to state that it might become certain providing the subject's evidence is suitably augmented, whether by application, luck, or whatnot. In asserting that 'complete' or 'perfect' knowledge cannot be achieved in respect of a belief which is 'probable' or 'uncertain', Descartes is

3. Actually, there may be *practical* reasons for accepting a belief which is (known to be) untrue, as in the case of Newtonian mechanics. So a substantive assumption lurks behind the claim that a belief's falsity obliges its rejection. It is still evident, despite this, that relativising rational acceptability to truth is nowhere near as substantive as relativising it to knowledge. As it happens, Descartes is, we shall see, aware of the possibility of assailing the principle of doubt on practical grounds.

therefore implying that an uncertain belief is in some sense untrue in itself.

The distinction adumbrated here remains to be clarified. Assuming that clarificatory efforts will bear fruit, it is easily appreciated how an interpreter who fails to recognise the ambiguity, and *a fortiori* fails to enforce a separation of the senses, will run into difficulty when construing Descartes' negative thesis about perceptual cognition, that perceptually grounded beliefs are 'uncertain' in the truth-involving sense. (I take it as granted that Descartes does hold these beliefs to be untrue. Evidence will be supplied shortly.) The sceptical considerations of the opening Meditation do not appear to contribute support to such a result. At most, they underwrite the conclusion that the subject's beliefs are 'uncertain' in the truth-neutral meaning of the term, i.e. that in spite of what he may uncritically think he is ignorant of their truth. And this conclusion falls distressingly short of the minimum required to further Descartes' negative aim.

4. *CP, PD, SA: a blueprint*

The well-known *impasses* in received interpretation of the Cartesian critique of the senses result from a constant failure to identify the thesis that Descartes is out to establish, viz. that perceptually-grounded beliefs are truth-involvingly uncertain, and from the complementary failure to appreciate that he does not advance the sceptical materials of Meditation 1 in a strictly probative capacity. That these materials are neither suited to proving nor designed to prove the thesis would only mark a decisive flaw in the overall position if Descartes had nothing else to offer in direct defense. But he does have more to offer, though at the stage of the opening Meditation it enters somewhat recessively, and is overshadowed by the highly dramatic sceptical points. The structural reasoning about sense-based cognition — the reasoning which is directly associated with the principle of doubt — constitutes the addition. Postponing the textual location and assessment of this reasoning and taking as my

primary data the readings advanced by those who fudge the actual division of rhetorical labour, I want, in preparation for positive exposition, to illustrate the way in which intolerable results are reached by travelling this route.

The problem can be restated with greater precision. Descartes' sceptical argumentation does nothing to establish the untruth of sense-based beliefs; their truth-involving uncertainty. The sceptical argumentation is compatible with a proposition whose rejection is demonstrably crucial to Descartes' project. The proposition, to be denominated *the conditional proposition*, states that if the experiencing subject could determine that he is sense-perceiving as opposed to dreaming, and that his sense-experience is non-deceptive, he would then be entitled to take the representative content of his state of consciousness to deliver accurate information about the world; he would be justified in regarding the proposition expressing the representative content of that state as true. I said that Descartes' rejection of the conditional claim is uncontroversial. Evidence will be found, for example, in Meditation 6, where it is asserted that corporeal things 'are...not exactly what we perceive by the senses' (/191). One who purposes to determine the state of the world 'exactly' cannot rely on the senses, even supposing experiential conditions to be optimal. Similarly, the point is made in *The Search After Truth* that 'our senses... perceive that alone which is most coarse and common' (/312) — a point which receives a wholly general formulation on several occasions in the *Principles*: 'in truth we do not perceive any object as it is in itself by sense alone' (1.73/251); '*the perceptions of the senses do not teach us what is really in things*' (2.3/255).

With the conditional proposition in hand, the situation of the prospective interpreter can be described in a helpfully schematic fashion. In addition to Descartes' rejection of the conditional proposition (I will henceforth code the proposition as CP, its denial as CP*), a rejection expressing the negative thesis that sense-based beliefs are untrue, the other two data with which the interpreter must contend are the principle of doubt (PD), that 'uncertain' beliefs are rationally unacceptable, and the sceptical argumentation (SA) concerning

dreaming and waking, delusive and non-delusive sense-experience, etc.

SA cannot sustain CP*. An interpreter who takes PD to be worked out by SA, i.e. who takes SA to comprise Descartes' application of PD to sense-based beliefs, is obliged to conclude that CP* is unestablished by what Descartes puts into Meditation 1. Typically, since those who so regard the link between PD and SA recognise that CP* is crucial for Descartes' push towards 'science', they represent him as erroneously using SA to defend CP*. The net result is a sorry litany of Cartesian misconceptions — and hence an account of Descartes' reasoning which is exclusively diagnostic, without an atom of justificatory power. Another approach is possible. Some interpreters (in my view correctly) hold that SA is not used by Descartes directly to sustain CP*. But because they detect nothing in the first Meditation relevant to CP* besides SA, they are boxed into the unhappy adversary condition of maintaining either that Descartes' support for CP* is non-existent or that its defense is predicated on question-begging assumptions guilefully spirited in between the lines.

The same error is committed by proponents of each approach: failure to recognise the independent status of PD. The decisive riposte to those who take the first line is that PD, not SA, is at the core of Descartes' argumentation for CP*. So he cannot fairly be accused of unconscionable rhetorical trickery. And *pace* followers of the second line, Descartes' SA-independent defense of PD, which they fail to discern, clears him on the charge of reaching CP* dogmatically.

5. *SA and the rationality of doubt*

'[I]t is sometimes proved to me that these senses are deceptive' (Meditation 1/145). From the well-known fact of occasional sense-deception Descartes extracts the moral that the senses are to be mistrusted generally: 'it is wiser not to trust entirely to any thing by which we have once been deceived' (ibid./ibid.). Since, on a natural reading, there is nothing contentious here, there is also little to advance Descartes' case. If on occasion an informant has misled me,

wilfully or in good faith, it isn't an unreasonable policy to take everything he says with a grain of salt. But it doesn't follow that all the information he supplies is inaccurate. So the fact to which Descartes calls attention has no tendency to show that the senses never supply accurate information, let alone that due to some irremediable flaw they cannot supply it.

A great number of interpreters have not shrunk from maintaining that Descartes does argue invalidly along roughly these lines; that he alleges, on the strength of the premise that any proposition belief in which is engendered in a sense-based way might be false, that all propositions assented to on sense-based grounds might be false. Obviously, this argument deserves no more consideration than the formally parallel move from the truth that, compatibly with the present existence of the human species, any parent of a previous generation might have been childless, to the falsehood that every parent of that generation might have lacked issue. But in this way, unflattering though it be to Descartes, a link is forged between SA and the denial of CP.

Compatibly with my general thesis about the proper interpretation of the first Meditation, I will eventually show that Descartes defends CP* without passing invalidly from 'any' to 'every', or from 'some are' to 'all might be' and thence to 'for all intents and purposes, all must be regarded as if they are'. Even were no alternative construal actually available, one might have thought that the interpretation sketched would be regarded with grave suspicion because of its excessively unflattering character. However, it is just possible, without transcending the sceptical materials of Meditation 1, to absolve Descartes of committing the mentioned errors. It can be maintained that Descartes introduces the dream-argument (which is part of the sceptical arsenal) in order to impel the mildly critical reflective thinker to cast a general doubt on his sense-based beliefs. If so, it isn't merely because of occasional sense-deception that he is obligated to distrust his eyes, ears, and so on. What obligates him, rather, is the possibility that whenever he thinks himself to be sense-perceiving he might in fact be dreaming.

Descartes is indeed cleared along this line of the preceding

elementary logical blunders. But the 'improved' argument breeds new problems, and considered in the context of Descartes' wider project has nothing else to recommend it than the momentary relief it brings. After what must strike sponsors of this construal as a worryingly complacent consideration of the nature of dreaming, Descartes concludes that 'there are no certain indications by which we may clearly distinguish wakefulness from sleep' (/146). (I might just add that though Descartes' remarks about dreaming are casual, the charge of complacency is in my view unjustified since, as I shall argue, he doesn't attach much importance to the issue.) Those who opt for this line cannot fail to be embarrassed by the fact that the conclusion appears to clash with what Descartes requires. Suppose the absence of criteria is conceded. Surely the implication is that *if there were* effective grounds for distinguishing wakefulness from sleep the subject could take the representative content of those states identified as waking states to inform him accurately about the condition of the world. A useful way of confirming the thought is by inverting Descartes' reasoning, i.e. by exploiting the (alleged) absence of criteria as a ground for maintaining that when any of us thinks himself to be dreaming he might be mistaken. It follows that one who insists that he is dreaming in support of the denial that his state of consciousness vouchsafes him information about the world might be in error. He might, that is, be awake. But if he is awake, doesn't the logic of the argument dictate his denial of objective fidelity to the representative content of his consciousness to be itself in error?

As far as its standard sceptical content goes, the strongest effect which Descartes' dream-argument could plausibly be thought to have on the normal subject is to induce in him, whenever he is inclined to believe that he is, say, seeing the sun, the thought that he may only be dreaming that he is seeing it. By analogy, an air-traveller might be right to wonder whether his plane has landed in Detroit or in Washington. But if the traveller knows that his carrier travels to these two destinations alone (*mutatis mutandis*, Descartes never considers a third possibility distinct both from dreaming and waking), he could still be sure that he is either in Detroit or in Washington. For him to use his uncertainty as a ground for withhold-

ing assent from the assertion that he is in either city would require treating 'Detroit or Washington' as an indissoluble unit — so that one who correctly describes himself as being in Detroit or in Washington could not by simple logic conclude that it is either true of him that he is in Detroit or true of him that he is in Washington. This is, I take it, patently preposterous. By parity of reasoning, it follows that if the subject who does not know whether he is dreaming or awake is in fact awake, then what his senses tell him constitutes accurate information about the world.

Faced with this kind of difficulty, some interpreters are motivated to suggest that Descartes' real concern in the first Meditation is only to show, on the strength of the sceptical considerations, that no subject is rationally entitled to place credence in beliefs engendered by sense-perceptual means, and consequently that all such beliefs must be rejected in accordance with PD. This is one way of interpreting the principle; the wrong way, I believe. But whether or not the content of the suggestion is independently true, the interpreter we are at present engaging is in any case precluded from offering it in Descartes' name. On such a line, the rationality of doubting, conceived as based on SA, is cut loose entirely from Descartes' positive conception of knowledge — precisely for the reason that one who agrees that he is rationally obliged to doubt his normal beliefs in this sense can still cleave to CP. Consider our air-traveller again. Having enplaned in haste via the gate for the (different) shuttle flights to the two destinations, he isn't rationally justified, upon landing, in coming down firmly in favour of one of the disjuncts: 'Detroit or Washington'. But there is obviously no denying that he is in one of the cities, not in some ontologically monstrous disjoint metropolis. (Plainly, wavering between the disjuncts doesn't constitute a third option.) So construing the issue of rational entitlement therefore disconnects it from the issue of truth: that a subject is unentitled to pronounce for *p* is neutral on *p*'s truth-value. But isn't it a basic premise of the interpretation that Descartes thinks himself to be impugning CP (i.e. supporting his negative conclusion) by adducing SA? If the interpreter remains faithful to the premise, he finds himself wedded simultaneously to claiming, on the one hand, that the dream-possibility is introduced by

Descartes in order to avoid the elementary error of passing from occasional to exceptionless sense-deception, and on the other hand to conceding that the whole issue of dreaming really has no power to advance the project. Isn't this intolerable? Since the interpreter holds out no hope for Descartes' argumentation in the first place — SA, he realises, cannot establish CP* — *his* insouciance doesn't surprise. But the genuine intolerability of the outcome will emerge if we reconsider the textual siting of the dream-possibility.

The case of dreaming is introduced by Descartes after a brief examination of the facts of non-veridical sense-experience. Pondering the matter for a moment, it quickly becomes plain that the very conclusion Descartes is represented by our man as resting on the dream-possibility could be rested not one whit less effectively on the uncontentious facts of delusive sense-experience. We may agree that confusing a dream-state for a waking experience is more drastic than confusing a non-veridical sense-experience (e.g. the experience of the square tower in the distance as round) for a veridical one. But since the general doubt is held to be based by Descartes on the possibility of confusing veridical experience for something else, exactly the same effect could be achieved without bothering at all with dreaming. Because error is used to explain error on this interpretation, a rhetorical reason can be conjured up for Descartes' having introduced the probatively useless issue of dreaming: had he permitted his argumentation to unfold entirely within the waking realm, even a docile reader would have noticed that something is sorely amiss. 'Veridical sense-experience' *means* 'experience via the senses which supplies *true* information about the surroundings'. Consequently, the reader could scarcely have failed to realise that Descartes' argumentation here commits him to the conditional proposition. Removing to the case of dreaming (it is therefore claimed) serves the purpose of delaying the realisation. I do not say, incidentally, that Descartes' introduction of the dream possibility does not play this purely rhetorical role. But it is one thing to maintain that Descartes frames his reasoning in this fashion in order to prevent the reader from noticing the commitment to the conditional proposition, when it is also denied that he has any

non-question-begging basis at all for rejecting it; quite another to maintain that Descartes adopts this debating tactic because he has such a reason up his sleeve.

These claims about Descartes' motives are, I concede, a trifle conjectural. However, for a further reason, it is in any case perfectly obvious that the interpretation is inaccurate. Descartes returns in Meditation 6 to reconsider the problem of distinguishing dreaming from waking life. Never mind the limited merit of the solution offered, with its fragile appeal to divine veracity. The point to note is that the solution put forward is completely neutral on the truth-value of the conditional proposition. For, once again, Descartes holds that the beliefs we base on (genuine) sense-information are unsuited for inclusion in the 'scientific' picture of reality. Even if he admits that the distinction can effectively be made, Descartes would still forbid us to repose scientific trust in those standard factual propositions which express the representative content of waking states. The capacity effectively to determine that the second of the prefixes 'I am dreaming that I am sense-perceiving' and 'I am sense-perceiving' applies is not one and the same as the capacity effectively to determine the 'exact' state of the world. So we have no option but to assign to the sceptical argumentation of Meditation 1 a secondary or non-probative position in the overall structure. This is not, I emphasise, to demote SA to a secondary position despite Descartes' own attitude towards it. It is to recognise that Descartes himself does not advance SA as a premise in demonstrative support of CP*.

6. *Weak rationality: Kenny's interpretation*

To reach his negative goal of establishing the scientific deficiency of sense-based information, Descartes must show that such data are compromised in the dimension of *truth*. Genuine success will not be gained here by hammering away, however forcefully, at the difficulty of distinguishing a veridical from a non-veridical sense-experience, or the difficulty of consciousness which only appear to have a sense-perceptual origin, since neither of these delivers a logical body blow

to CP. In fact, CP would naturally be regarded as acceptable to a theorist whose main concern lies in demonstrating the severity of such problems. Unless Descartes is to an astonishing degree oblivious of what reaching his *terminus ad quem* requires, the argumentation he supplies should therefore be amenable to reconstruction without essential appeal to anything other than cases of perception which qualify, and qualify even paradigmatically, for characterisation as 'veridical'. One would not expect the demonstrative topology of the Cartesian system to be fundamentally different even if experiencing subjects passed all their nights in unconscious slumber and all their days in optimal employment of their eyes, ears, etc.

It might be claimed, as indicated above, that the desired effect of SA is to induce in the rational subject a doubt as to whether he is, say, seeing the sun or merely dreaming that he is seeing it. Certainly, this line of interpretation raises problems for Descartes' wider project. But the argument might still be made that my attempt to motivate a 'deeper' reading of Meditation 1 comes to grief on it. For Descartes' aim in the first Meditation is to show that sense-based beliefs fail to qualify as 'certain', and the stated effect seems appropriate to the aim.

So to reason is to grant that Descartes doesn't intend SA to function in defense of CP*. In view of the gap thus recognised between the two, a sponsor of this second line therefore has the luxury of a choice when he comes to explain what the rationality of Cartesian doubt consists in. A proponent of the first line, since he represents Descartes as using SA to establish that sense-perceptual beliefs are untrue, has no choice: he must attribute to Descartes the thesis that the rational unacceptability of any such belief is due to its truth-involving uncertainty. In principle, an advocate of the second line isn't prevented from taking the same stand on this matter. But Descartes, in his view, uses SA to establish only that the rational subject has no right to assent to his normal sense-based beliefs; so he is more likely to construe the rationality of doubt as relative to knowledge than as relative to truth. This is obviously a weaker conception of rational obligation, inasmuch as a subject who unreservedly agrees that assenting to his perceptually-acquired beliefs is irrational in this sense can nevertheless continue to insist that the

propositions believed might still be true. Consequent upon the weakening, a price must therefore be exacted in compensation. Descartes' rejection of CP is vital for the success of the Cartesian programme. The interpreter who reads the texts in the manner described therefore has no alternative but to agree that CP* is supported only dogmatically in Meditation 1, from which it has to follow in his judgement that whatever Descartes might himself have thought the subject can demur at the meditative critique of the senses as possible sources of truth without prejudice to his baseline rationality qua opponent of falsehood.

As I see it, the obligation Descartes regards the rational subject to be under is the stronger one. Though supporters of the first line are right in little else, they are right to maintain that the rationality of doubt is according to Descartes relative to truth, i.e. that the rational subject is in Descartes' view committed to discarding the propositions expressing the representative content of states of consciousness resultant upon direct sense-employing contact with the world because they are untrue. These interpreters go wrong however in failing to recognise that Descartes doesn't defend the obligation via SA. Here, those who support the second line are in the right. But their advantage is accidental and momentary; they in turn err by charging Descartes with establishing the obligation in a dogmatic fashion.

The interpretation now to be examined, A. Kenny's,⁴ isn't a pure exemplification of the second line. But it sufficiently matches that line in its initial assumptions profitably to be approached as a version thereof. Because of Kenny's sensitivity to relevant features of the texts, he is forced, in spite of his basic assumptions, to move beyond SA to PD. As I explained, the notion of uncertainty informing PD is truth-involving. The materials Kenny introduces in the frame of a construal which is perceived by him as interpreting the obligation truth-neutrally are materials which in actuality implicate Descartes' truth-involving sense of the notion. By concentrating on Kenny's deviations from a pure exemplification of the second line, considerable insight can therefore be gained into the true character of the Cartesian position.

4. In *Descartes: A Study of His Philosophy* (New York, Random House, 1968).

7. Kenny's unwitting flitting

The objective of the opening Meditation is negative. So far as the first cognitive foundation goes, the goal is to show that the rational subject is under an obligation to reject each of his sense-based beliefs on the grounds of uncertainty. Kenny's charge that '[a] universal doubt is neither necessary nor rational'⁵ isn't levelled against the independently debatable principle that a belief which turns out to be uncertain should be discarded; it is levelled against Descartes' blanket characterisation of sense-based beliefs as uncertain. The kernel of Kenny's critical reaction to this Cartesian thesis is found in the following interrogative salvo, whose missiles are regarded as rhetorical:

why should the fact that I have *some* false beliefs prevent my being certain about *any*? Can *none* of my beliefs be certain unless *all* are certain? Descartes' argument presupposes this, but he offers no proof of it.⁶

To which argument is Kenny referring? He is referring to SA. But wouldn't it have been more accurate for Kenny to have described Descartes' proof as inadequate, not as non-existent? By exploiting the tell-tale shift from 'false' to 'certain' in the first sentence quoted, we can formulate a claim for which SA indeed supplies no proof at all, *a fortiori* not even an inadequate one, viz. that the falsity of one of a subject's perceptually-acquired beliefs is incompatible with the truth of any of them. To this claim SA is entirely tangential, since the uncertainty whose attribution it supports is compatible with truth. Surely though, it is an exaggeration baldly to declare that SA gives no support to the corresponding claim about certainty. Agreed, what I say about falsity could also be said about uncertainty if 'uncertain' is construed in a truth-involving way — so that a belief's falsity can be inferred from its uncertainty. But in light of the manner Kenny adjusts his formulation in the second sentence it is obvious that he isn't thinking of 'uncertain' as a truth-involving term. Still, though as a matter of *psychological* fact Kenny plainly doesn't have such a sense

5. *Descartes: A Study of His Philosophy*, p. 20.

6. *Descartes: A Study of His Philosophy*, p. 19.

in mind, the difficulty points in a definite direction. It hints that as a matter of *analytic* fact Kenny is associating with PD theses separable from SA. Now this has been my suggestion precisely: the texts contain PD-associated and SA-unassociated theses. But only an interpreter explicitly aware of how sharply these are dissociated from SA is likely to reap benefits.

Kenny flits between the two meanings of 'uncertain', treating it at times as a virtual synonym of 'false', at times truth-neutrally. While Descartes' formulations leave a great deal to be desired, when all is said and done *his* position on this matter isn't indiscriminate. He possesses arguments for the strong claim that the falsity of any one of a subject's sense-based beliefs is incompatible with the truth of any other. Because these arguments are formulated by means of 'uncertain', they are obscured from the latter-day reader's view, since his field of vision contains only the truth-neutral term.

Kenny recognises that SA doesn't function by itself in Descartes' hands to support CP*. This is what he means when he declares that Descartes' argument offers no proof. Accordingly, his interpretation follows the second line. But, to repeat, Kenny's error consists in overlooking the independent status of PD in the overall reasoning. 'Descartes' argument' is far from exhausted by SA.

To sharpen our view of the gap here, let us set out afresh, the precise object being to see how the various textually-motivated moves made by Kenny bring him into conflict with his own truth-neutral reading of the Cartesian notion of uncertainty.

In the second sentence of the passage set off above, the sole premise that Kenny attributes to Descartes is, then, the (surely unexceptionable)⁷ premise that some among a normal subject's beliefs

7. I parenthesise the qualification to indicate that the thought it voices is Kenny's own. In the event, the premise is not all that unexceptionable. Descartes' project is so extreme that it should be tested against an opponent who is equally extreme, short of self-contradiction, in his resistance. And though it may be immodest, it is not logically incoherent for a subject to claim impeccability in his normal beliefs. In what follows, I will show that Descartes' actual argument is effective against even such an opponent, and is intended to be — a result which will *ipso facto* show that Kenny's reading is mistaken.

are bound to be uncertain in this sense. Couldn't the premise be granted even by one who contests everything else Descartes says in the course of arguing sceptically about the difficulty, or impossibility, of distinguishing dream states from waking experience, or delusive from non-delusive perceptions?

Even if we respond affirmatively, an embarrassing question arises. Solely on the strength of the premise of sure uncertainty among a normal subject's beliefs, how can Descartes advance towards his negative goal? Kenny, basing himself on Cartesian remarks to be examined presently, responds that Descartes' advance is aided by a principle, adumbrated already in passing, which I shall refer to as *the principle of the infectiousness of uncertainty*: uncertainty at any one place in the subject's fabric of belief communicates itself to the occupants of every other place in that fabric.

The principle can be interpreted weakly: because a subject's stock of beliefs, acquired in the normal course of sense-perceptual commerce with the world, invariably contains some which were accepted for less than the best possible reasons — a result, typically, of the exigencies of action, which render unremitting vigilance or concerted attention unfeasible — the subject should be motivated to agree, on inductive grounds, that even those sense-based beliefs he is pre-reflectively inclined to designate as beyond reproach might have been accepted despite his failure to exercise the highest degree of critical scrutiny.

This weak reading of the principle leaves the argument in a sorry state. Required is a demonstration that because uncertainty invariably taints some of the normal subject's beliefs, it does affect each and every belief. But even if the subject grants that all his beliefs might be uncertain, that wouldn't clash in logic with an insistence on his part that some of them might be certain. This is after all part of the force of the first 'might' here, as the following valetudinarian analogy suggested by the principle's name confirms. That one of several patients on a ward is diagnosed to have a highly infectious disease would create a presumption that all the patients are afflicted: all of them might be infected. The presumption is however compatible with the truth of the assertion that some of the patients haven't

contracted the malady. *Mutatis mutandis*, it would be irrational for the subject, so far as the inductive reasoning goes, to tar all his beliefs with the brush of uncertainty because of the uncertainty of some.

If Descartes' argument followed the preceding pattern, it wouldn't merit continued attention. The logical flaw is further indicated by noting that, on the construal sketched, 'infectiousness of uncertainty' is a misnomer. An advocate of the inductive argument doesn't hold that an uncertain belief communicates *its* uncertainty to others: actual contamination isn't claimed. The thesis is only that reasons of the same kind that imply the uncertainty of the belief might also impugn the certainty of others.

Descartes, according to Kenny, endorses a form of the principle of infectiousness which does not have this (too) weak character. He is portrayed as contending that uncertainty is *actually* infectious: if any belief is uncertain, then all beliefs are uncertain. On this strong construal of infectiousness, Descartes' argumentation regains its logical respectability. If the rational acceptance of a proposition requires that it be certain, and if uncertainty actually contaminates, then the subject is rationally obliged on simple logical grounds to reject all of his beliefs once he concedes the uncertainty even of one of them. And the obligation turns categorical given that the degree of caution which a normal subject with a moderately varied experience of the world can be expected to have exercised before annexing a proposition to his store of beliefs is such that he will invariably find some uncertainties therein.

Why however should we be expected to agree that uncertainty is actually infectious? Nothing Descartes says in the course of SA supports such a principle or commands our assent. Kenny claims that Descartes *presupposes* the principle. And while he does not explicitly assert this, Kenny clearly thinks that Descartes presupposes the principle as a *sine qua non* of achieving his desired result via SA, viz. that the rational subject is obliged to reject all of his normal sense-based beliefs. But Kenny's thought here is mistaken. It is simply too obvious that the content of Descartes' SA supports nothing beyond the weakly inductive claim of infectiousness. It should not be retorted that Kenny knows this to be true, and ascribes the presupposition to

Descartes precisely because he attributes a similar knowledge to him. By reference to what I have said in a slightly different connection, it is easily seen that Descartes' acceptance of a principle of actual infectiousness would have obviated all need for him to leap headlong, as he surely must seem to Kenny to be leaping, from the frying pan into the fire, i.e. from the moderately contentious problematic of delusive and veridical sense-experience to the radically contentious dreaming/waking problematic. For the strong principle of infectiousness would itself justify classifying every waking belief as uncertain because of the uncertainty of some — even of one. So it is doubly implausible to hold that Descartes presupposes the principle in the context of SA. (It is indeed triply implausible. The additional source of implausibility will be identified in the second paragraph of the upcoming section.)

As mentioned, Kenny attributes the principle to Descartes on the basis of texts. But when we examine the relevant passages, which I now propose to do, it emerges that SA has in fact been left far behind. So, again, it is insupportable to pin the principle on Descartes in the frame of an attempt to reconstruct his SA-associated thinking.

8. *Unified science and the infectiousness of uncertainty*

'Why', Kenny was quoted to ask, 'should the fact that I have *some* false beliefs prevent my being certain about *any*? Can *none* of my beliefs be certain unless *all* are certain?' In themselves, these are good questions. As we normally conceive falsity and uncertainty, neither of them is actually infectious. But Kenny is not imputing to Descartes an elementary misunderstanding concerning the logic of these notions. Kenny maintains Descartes' advocacy of the strong principle of infectiousness to be based on yet a further Cartesian thesis. With an eye on a passage like this, that 'all the sciences are conjoined with each other and interdependent' (Rule 1/2), and on Descartes' talk of 'the fabric of the whole world' (*Principles* 4.205/301), Kenny observes:

Descartes believed that all human sciences formed a unified whole, so linked together that it could be held in one's mind with no more difficulty than the series of natural numbers. If this is so, then a man's scientific beliefs must either be all true or all doubtful.⁸

If *this* is so, Descartes cannot be convicted of sinning in an elementary way against the logic of 'probable' or 'uncertain' and 'false'. Because Descartes takes scientific knowledge to be unified (I will call this *the unified science thesis*), he sees falsity or uncertainty at any one place in the fabric of belief being transmitted to other regions.

Kenny's words contain an obvious difficulty. Suppose that all scientific beliefs are regarded by Descartes as interconnected — deductively one assumes. It does not follow that a man's unscientific beliefs are so interconnected. With what right then does Kenny proceed to represent Descartes as arguing from the falsity or uncertainty of one of a subject's beliefs to be falsity or uncertainty of them all? Compliance with the internal logic of his own thinking requires of Kenny that he interpret Descartes to be making an entirely different move: from the fact that falsity and uncertainty are *not infectious* in the case of ordinary beliefs to the conclusion that these beliefs aren't scientific.

Though this inversion of the proper order is a pretty conclusive sign that Kenny hasn't thought the approach through, another feature of his discussion holds more immediate interest. In the passage last quoted Kenny links the notion of doubtfulness, of uncertainty, to the notion of truth-value: by writing that a man's beliefs must either be true or doubtful, Kenny allows his words to imply that doubtful beliefs are untrue. Since SA operates with a truth-neutral sense of 'uncertain' or 'doubtful', it follows that, unknowingly it appears, Kenny has effectively passed beyond SA. Whatever Kenny may think himself to be doing, he isn't merely attributing additional views to Descartes which the latter can plausibly be regarded as using to beef up the sceptical materials so as to sustain the desired outcome.

This puts virtually beyond challenge my claim that Descartes cannot correctly be construed as attempting in the first Meditation to

8. *Descartes: A Study of His Philosophy*, p. 19.

demonstrate CP* on the basis of SA. Not only is it mistaken to hold that SA itself functions in Descartes' hands to undermine CP, but it is also erroneous to maintain that Descartes supplements SA with auxiliary assumptions (the thesis of unified science and its train, Kenny would have us believe) in order to make the case. Since the additional assumptions treat 'uncertain' truth-involvingly, they cannot mesh with SA's truth-neutral homonym to support any conclusion towards which SA itself points but which it is too weak to establish.

It is, I suppose, because Kenny is convinced of the futility of defending Descartes' position that he is less than vigorous in attempting, given this last fact, to unravel the argumentational threads of the opening Meditation. Why should he expend the energy believing as he does that the main SA-augmenting assumption — the thesis of unified science — 'is not a premise to which Descartes can fairly appeal in order to convince the uncommitted reader of the need for the method of universal doubt'⁹? But if we examine more closely why Kenny claims that Descartes is unentitled to the supplementary assumptions, it begins to appear well-nigh unquestionable that he could not conceivably be premising any such thesis.

The assumption of unified science, offered as clearing Descartes of the elementary error about falsity and uncertainty, collides head-on with a serious commitment to doubt. Not that in the context of what is expressly described as a comprehensive intellectual prophylaxis Descartes is entitled to *no* assumptions whatever, *a fortiori* not to the thesis of unified science. It will remain a vexed issue of Cartesian study *which* assumptions are compatible with the doubt. Can Descartes legitimately help himself to logic? to simple natures? to cognitive capacities bound up with doubting? These issues require, and some are treated by Descartes to, special debate. The point, rather, is that even by the most lenient standards the thesis of unified science is far too meaty a thesis to stand the slimmest chance of slipping through compatibly with a sincere regard for the injunction 'to doubt all things in which the slightest trace of incertitude can be

9. *Descartes: A Study of His Philosophy*, p. 19.

found' (*Principles* 1.1/219). Even if it could for example be established that Descartes' serious commitment to the method is not compromised by his (tacit) acceptance of logic, he could not conceivably have allowed himself, compatibly with the conditions of doubting, to proceed complacent in the belief that the sciences are woven into a single seamless fabric.

Though it is true, it is forceless here to rejoin in Kenny's defense that Descartes does assume all manner of doubt-incompatible 'principles', e.g. the metaphysical principle of causation used to establish God's existence. For what Kenny states is at odds not only with a serious regard for the principle of doubt (so is the causal principle), but also clashes with Descartes' claim that the doubt halts at the *cogito*. Much is uncertain about Descartes' position. But it is at least clear that he thinks the *cogito* to supply the doubting subject with a piece of certain knowledge unsullied by the masses of doxastic detritus which normally weigh him down.

Evidently, Kenny's exegetical morass results from a failure to observe the distinction between Descartes' negative point in the first Meditation, that a sense-based conception of the world is in principle unscientific, and the positive conception of scientific knowledge which informs the constructive parts of the position. Though the thesis of unified science may well be something Descartes does assume when arguing constructively, it makes no contribution to his critique of perceptual cognition. Indeed, because of the obvious difficulty noted in the second paragraph of the section, Descartes would have had to be very badly confused to use the thesis in developing the critique. Similarly, the attribution of truth-involving uncertainty to perceptually-based beliefs isn't rested on SA, since it is plain that the sense of 'uncertain' which figures in SA is truth-neutral.

9. From 'any' to 'every': a valid argument

With the preceding lines of interpretation in disarray, the desirability of an alternative is apparent. Indeed, the rather systematic way in which the various options open to one who takes the standard

approach fail creates an exegetical obligation to seek something better. The weakness of the first line of interpretation supports the conclusion that SA is not used by Descartes strictly to justify CP*. From the manner Kenny's version of the second line collapses, it is also clear that a proper reading must explicitly distinguish the truth-involving and the truth-neutral senses of 'uncertain', since there can be no real doubt that Descartes' defense of the claim that perceptual beliefs are 'uncertain' in the former sense — a claim needed for his wider purposes — is in principle incapable of being fashioned from materials supplied in SA.

Fruitful destructive criticism must lead to construction. To conclude, I will locate the precise point on which the proper representation, and possibly defense, of Descartes' negative thesis will turn. Kenny's discussion helps to locate the pivot.

Descartes, according to Kenny, illicitly imports the unified science thesis in order to justify the move from 'Some sense-based beliefs are uncertain' to 'All sense-based beliefs are uncertain'. Failing the importation, Kenny maintains, Descartes' transition would be invalid for transparent logical reasons. (More complex formulations of the move are also possible, e.g. that Descartes argues that every sense-based belief is uncertain if any is, and relies on the unexceptionable proposition that at least one of a normal subject's perceptual beliefs is bound to be uncertain. As before, the argument will be said to go through in logic once the unity of science is premised.)

Though the repellant diagnosis implied by this — that Descartes' argument is either elementarily invalid, or else that Descartes purchases validity by smuggling in a dubious premise — seems exhaustive, it isn't. Descartes moves from 'some' to 'all', or from 'any' to 'every'. But neither is the move he makes invalid, nor is its validity relative to a dogmatic assumption. (I repeat that the unified science thesis is in any case irrelevant to the transition, however interpreted. The beliefs under scrutiny here are, according to Descartes, unscientific, and the thesis applies to scientific beliefs.) Has Descartes been granted immunity from the logical commitments which bind the rest of us? Nothing of the kind. Rather, there is a

valid any-every (some-all) pattern of reasoning; the very pattern Descartes' reasoning actually exemplifies.

If any bachelor is unmarried, then every bachelor is unmarried. This transition is logically unimpeachable. True, the intersubstitution of 'undernourished' for 'unmarried' yields an argument which may lead from truth to falsehood. But this shows only that the initial, valid, argument is such that the replacement of terms will be disallowed. Very roughly, its real form is given by the following: if any F-thing is a G-thing because of what 'F' means (better: if it is essential to any item's being an F-thing that it be a G-thing) then every F-thing is a G-thing. Obviously, it is untrue that an undernourished bachelor is, qua bachelor, scrawny. So the stated replacement is blocked.

Descartes' any-every (some-all) transition in the first Meditation has this character. As he writes: 'if I am able to find in each [opinion] some reason to doubt, this will suffice to justify my rejecting the whole' (/145). (The French version has *toutes rejeter*, of which 'rejecting them all' or 'rejecting every one of them' is a better rendering than Haldane and Ross's 'rejecting the whole'.) If so, no any-every fallacy is committed. And do we, to warrant moving from 'any bachelor is unmarried' to 'every bachelor is unmarried', require a principle of unified bachelorhood? So the acceptability of Descartes' argument is not a hostage to any dogmatic reliance on the thesis of unified science.

The protest will be made that the argument, so understood, can only by courtesy be described as involving *a move* from 'any' to 'every'. This need hardly worry us, as the question is one of interpretation. Obviously, it is disingenuous of a Cartesian opponent to express surprise if, having decided in advance that Descartes' argument is at base inductive in character, he finds it deductively wanting.

II The Senses

Descartes' rejection of sense-based beliefs is grounded in a *structural* analysis of sense-based cognitive contact with reality. Because of the very structure of this mode of experience, the beliefs acquired thereby in principle fall short of the requirement of certainty. In principle, each such belief cannot be more than 'probable'; and the probability of a belief, in Descartes' sense of 'probable', is incompatible with the truth of the proposition believed. Two lines of support for this reading are located in the first Meditation, and the structural theme is traced through the whole Cartesian *corpus*. It is demonstrated that Descartes' structural analysis can be revived in modern, analytic, terms, with the help of the thesis that the semantics of standard factual propositions are non-realist. Accordingly, the analysis continues to hold interest even for contemporary epistemologists. From this it follows that *negative* thrust of Cartesianism — its treatment of mundane cognition, its policies and products — is interpretable, and hence evaluable, quite apart from any commitment to positive and problematic Cartesian views about 'real knowledge'.

1. *Action and God: two cognitive stances*

At its core, Descartes' critique of sense-based experience is structural in character. Because of the very structure of this mode of cognition, the beliefs acquired by the subject in the normal course of perceptual contact with reality are 'not entirely certain', and the propositions which express the factual content of these beliefs do not therefore pass scientific muster. The sceptical materials of Meditation 1, silent on the structural considerations, play at most a subordinate, consolidative, role in Descartes' push towards science.

Two lines of support exist in the first Meditation, both distinct from the sceptical materials Descartes mobilises, for the conclusion that sense-based beliefs are, in accordance with the principle of doubt, rationally unacceptable. Our task is to locate and elaborate these lines.

The reader's attention is quickly caught at the start of Meditation 1 by a somewhat unusual use of the term 'action'. Descartes explains why the time is ripe for his project:

I should feel that I was doing wrong were I to occupy in deliberation the time that yet remains to me for action. To-day, then, since very opportunely for the plan I have in view I have delivered my mind from every care..., I shall at last seriously and freely address myself to the general upheaval of all my former opinions (/144).

Note how the 'general upheaval' is described as 'action', by express contrast with 'deliberation'. But isn't 'the plan in view' paradigmatically an intellectual, a reflective, a ratiocinative one, to be executed by that fugitive from the bustle of the *vita activa*, the solitary thinker installed in his *poêle*?

Descartes' curious use of 'action' here is fragile clue. 'In view of his quick reversion to a more natural use of the term, too fragile a clue', it will be retorted. For instance, a few pages later, Descartes says that in the *Meditations* he is 'not considering the question of action, but only of knowledge' (/148), and as the curtain falls on the work he admits that 'the exigencies of action often oblige us to make up our minds before having leisure to examine matters carefully' (Meditation 6/199).

Nonetheless, Descartes' unusual opening usage is no momentary compositional lapse or local trope. Witness the interpolation into the approved French translation of the *Meditations* of a phrase expressly designed to illuminate what the term, as so used, purports — thus an interpolation which confirms the deliberateness of Descartes' initial formulation. The interpolated addition, omitted from the above excerpt, indicates that conditions are propitious for meditation because the meditator is 'agitated by no passions' (Meditation 1/144). Wrapped up in this Sophoclean sentiment we have what will prove to be a *technical* use of the dichotomy of action and passion, or activity and passivity, which will help to render Descartes' choice of words fully intelligible. (Those immediately sceptical of my thinking here on the grounds that the interpolation is not Descartes' own may consider the fact that his approval of the added phrase survives the *Meditations*: it reappears at 1.28 of *The Passions of the Soul*.) And, to

gesture in the direction of imminent developments, an examination of the *Discourse* reveals a more forthright connection between what Descartes here describes as passivity and the notion of probable knowledge, cases of which the principle of doubt aims to identify for purposes of intellectual prophylaxis, with the goal of scientific renovation on the horizon: 'since often enough in the actions of life [= actions in the normal sense, the sense in which meditation is accounted *inaction*] no delay is permissible,...we should follow the most probable' (Discourse 3/96).

Another literary feature of Descartes' writings — a more pervasive one this time — complements and helps to explain the reversal in the normal use of 'action'. Repeatedly in the central Cartesian texts we encounter figures of a thematically uniform kind. The task of the philosopher is likened to that of a solitary executor of a plan entirely of his own devising. Descartes' dominant simile here is architectural, though, for variety, artistic and legislative analogues are offered too.

By way of motivating the doubt, Descartes observes in Discourse 2 that 'buildings planned and carried out by one architect are usually more beautiful and better proportioned than those which many have tried to put in order and improve, making use of old walls which were built with other ends in view' (/87). Thematically similar remarks follow about the superiority of towns 'regularly laid out on a plain by a surveyor who is free to follow his own ideas' (/88) and of states with a 'constitution laid down by some [sc. some one] prudent legislator' (/ibid.). It is essential, Descartes holds, to make the sciences 'conform to the uniformity of a rational scheme' (/89), and so he must 'build on a foundation which is entirely my own' (/90).

Such figures dot the Cartesian *corpus*. Eudoxus, Descartes' spokesman in *The Search After Truth*, comments disparagingly on the artist who attempts piecemeal to improve a picture in which 'the figures [are] badly placed, and the proportions badly observed' (/312). He 'would have done much better, after having effaced by drawing over it a sponge all the features of the picture, to begin entirely over again rather than lose his time in correcting it' (/ibid.). In the *Meditations*, Descartes puts the method to work, rather than 'discourses' on it: 'inasmuch as it was desired that I should undertake this task by many

who were aware that I had cultivated a certain method... — I have thought that it was my duty...to make trial of it in the present matter' (Dedication/134-5). So although we encounter the cognate claim at the very start that one must 'build anew from the foundation' (Meditation 1/144), the frequency of the similes diminishes. But the idea of an unencumbered agent or actor informs the *Meditations*, and informs it in a philosophically more committal fashion, via the connection between the possibility of a finite subject's gaining scientific knowledge — i.e. 'certainties' — and his either putting himself into, or vicariously exploiting, the special position of the divinity *vis-à-vis* the world. As Descartes writes: 'He on whom I depend possesses in Himself all the great things towards which I aspire [and the ideas of which I find within myself], and that not indefinitely or potentially alone, but really' (Meditation 3/170). The finite subject's journey to science retraces, in an intellectual or meditative medium, God's implementation of his plan in creation. (Would it be utterly fanciful to see in the number of meditations an allusion to the six days of Biblical creation?) And the divine situation paradigmatically exhibits both features of the philosopher's task mentioned above, God being the lone and unfettered executor of a plan he devises free of external constraints or pressures, 'unagitated', we may appropriately say, by 'passions'. Indeed, the linkage between 'action' and the divine case appears explicitly in Discourse 5: 'the action by which He now preserves [the world] is just the same as that by which He at first created it' (/109).

Descartes' unusual use of 'action' is rendered *prima facie* intelligible by these facts. Meditation is an intellectual analogue of the divine situation — a kind of intellectual *imitatio Dei*. Thus, by association as it were, the term 'action' is appropriately applied to it. The divine agent is an actor in the fullest sense of the word: pre-eminently or paradigmatically. He executes a plan entirely of his own making; he is unconstrained by another's will; he isn't motivated by any parochial or partisan interests. Similarly, the meditator is a disinterested investigator, 'agitated by no passions', and hence is set 'freely to address' the renovation of his intellectual condition. By contrast with one whose intelligence-involving activities are determined or shaped

by 'the exigencies' (Meditation 6/199) of the daily grind the meditator's condition is 'active' rather than 'passive'. As Descartes puts it in the earlier *Rules*, his efforts do not 'depend upon an exercise and disposition of the body' (Rule 1/1). Thus, once more in an architectural idiom, those of us who undertake the characteristically Cartesian search for knowledge are 'to act in th[e] capacity [of architect] ourselves, and make a careful...design' (Discourse 3/95). Naturally enough then, the word 'design', with its strong divine overtones, is continually applied to the prospective scientist, e.g. at Discourse 2/90, with God being mentioned in the same breath. The meditator, because he is 'agitated by no passions', is 'fitted to execute [his] design' (Meditation 1/144).

On the evidence it would seem that the cognitive stance whose adoption is a necessary condition for gaining scientific knowledge is an 'active' one, fundamentally distinct from the 'passive' stance which delivers what Descartes classifies as 'probabilities' or 'uncertainties'. 'Science in its entirety is true and evident cognition' (Rule 2/3). As I suggested in the preliminary remarks of I.3, this implies that there is no graduated scale leading to the certain from the probable: reversing a contemporary sentiment, Descartes might therefore have said that science is not an extension of commonsense.

These implications will have to be worked out much more fully. But despite our present agnosticism about the merits of Descartes' case, the contrast between the Cartesian notion of probability and the standard one is clear. Ordinarily, nothing prevents a single proposition from counting as probable and as certain. It may be probable for an evidentially disadvantaged subject, certain for another subject whose evidential condition is superior; probable for a subject at one time, certain for that same subject at a later time just in case his fund of evidence is suitably augmented. A specific kind of *gradual improvement* in the cogniser's evidential position would ordinarily be deemed epistemologically sufficient to upgrade a belief from probable to certain. By contrast, nothing short of a *thoroughgoing transformation* of his cognitive stance could suffice for a 'passive' cogniser to come by Cartesian certainty. If we try hard, we can eke out a doctrinally neutral sense for the link between certainty and passivity: the

complacent subject who sits back passively rather than putting his beliefs actively to the test is unlikely to weed out the unworthy ones. But this must be, and is, a pale facsimile of the Cartesian connection. Were this Descartes' thought, the method of doubt would fall to objections of the kind commentators perennially raise.

'Probable' or 'uncertain' beliefs are, according to Descartes, the province of a scientifically deficient cognitive stance. Without need for additional assumptions, he can therefore move validly from the probability of any of them to the conclusion that they all are uncertain. What of the thesis of unified science, seen by Kenny and others as instrumental in Descartes' critique of the senses? To deny that Descartes regards science as unified would be to fly in the face of the texts. The belief in scientific knowledge as a single whole obviously figures prominently in the picturesque illustrations Descartes offers of the putatively superior mode of cognition — God acts in accordance with a comprehensive 'rational plan'; his product, like the town laid out by a single hand on a featureless plain, has a unified structure, each part being reciprocally adjusted to and harmonised with every other. But this holistic conception of knowledge as a web of tightly interrelated propositions is not being enlisted as a premise. The negative thrust of Descartes' argumentation, viz. that a 'passive' mode of cognition is constitutionally incapable of delivering certainties, can be evaluated apart from the contention that beliefs 'actively' gained mesh into a unified pattern, as is clearly indicated by the fact that we may possess no beliefs of the latter kind.

It remains to be seen how the Cartesian contrast between cognitive activity and cognitive passivity links with the denial that sense-perceptually grounded beliefs are suited for inclusion in the 'scientific' picture of things. The thesis of unified science, it will emerge, plays a demonstratively dispensable role so far as Descartes' negative result is concerned.

2. *Scientists and artists: unified science again*

In elaborating the clue to Descartes' reasoning supplied by the dichotomy of 'action' and 'passion' at the start of Meditation 1, I moved backwards through the *corpus*. On general methodological grounds, the propriety of calling upon an earlier and immature text to amplify a later, mature, one can be queried. But the detailed defense of the thesis that the sceptical content of the first Meditation bears only an oblique, consolidative, relation to the principle of doubt, and hence to results Descartes eventually arrives at by applying the principle, should hold the query at bay in the present case. Fully to clarify Descartes' meaning, one further step backwards will now be taken, to the *Rules*. Though a good deal of this early and uneven essay is far from Descartes' mind in the period of the *Meditations*, it does contain, in the form of a contrast between two sorts of characteristically human activity, the roots of that structural critique of the senses in default of which the accusation would succeed that Descartes' negative result in the latter work is attained only by delivering up hostages whose ransom leaves the position bankrupt.

In Rule 1 Descartes counterposes two kinds of intelligence-involving activities: the 'scientific' and the 'artistic'. The intellectual activities of those who operate scientifically 'entirely consist in the cognitive exercise of the mind' (/1); the efforts of artists 'depend upon an exercise and disposition of the body' (/ibid.). We will eventually see that this dichotomy links directly with, and thereby assists in explaining, the more mature distinction between an 'active' and a 'passive' mode of cognition.

It is far from clear what the adumbrated contrast comes to. It is especially unclear how knowledge of the world — 'scientific' or otherwise — could be thought to be achievable by what Descartes seems to represent as *exclusively* ratiocinative means, though this unclarity dogs our efforts to comprehend rationalism as a coherent, let alone serviceable, theory of knowledge. Nevertheless, the rough lines of connection to what ultimately eventuates in the *Meditation* are discernible. Descartes' contrast between cognition in science and cognition in the arts prefigures the distinction between 'certainty',

required by the meditator as a condition of belief-acceptance, and 'uncertainty' or 'probability', which is isolated under the rubric of PD. The genuineness of the prefigurement finds confirmation in Descartes' subsequent claim that he must 'reject all...merely probable knowledge' (Rule 2/3) in his quest for scientifically adequate results. As we shall soon see in detail, this last claim is tied to the demand that the prospective scientist scrupulously avoid approaching his subject-matter in the fashion of the artist. And, I repeat, Descartes' contrast in Rule 1 is entirely uninformed by the sceptical preoccupations of the *Meditations*: the early opposition between 'arts' and 'science' is structural — a fact which promises exegetical dividends in light of the inability of the sceptical argumentation of Meditation 1 to further Descartes' negative goal.

Why does Descartes insist that those who conceive of science on the model of the arts are thereby blocked from achieving genuinely scientific results? Why do their best efforts lead only to 'probabilities', at the expense of 'good understanding, or universal Wisdom' (Rule 1/2)?

As an example to the intending scientist of what he must strive to avoid, Descartes holds up the case of those, active in his day, who occupy themselves with 'the virtues of plants, the motions of stars, the transmutations of metals' (ibid./ibid.). Descartes isn't suggesting that these subject-matters are not themselves grist for the scientific mill; that their investigation falls exclusively to the 'artist'. The complaint is that the approach to these areas taken by those he alludes to is inappropriate; that it isn't a properly 'scientific' approach, and consequently that their results are compromised. This is borne out by the fact that in Discourse 5 Descartes claims to have succeeded where those he objects to here are thwarted, i.e. finally to have achieved properly scientific results in these very areas. Thus he points proudly to his own researches into the origins of the earth, planets, and more distant heavenly bodies; into 'the nature of the light which would be found in the sun and stars'; into 'how the metals came to be in the mines and the plants to grow in the fields'; into combustion, solidification, and liquefaction — the 'transformation' of bodies into 'ashes and smoke', and of ash into glass (/108-9).

Now what makes Descartes' work worthy, at last, of the denomination 'scientific'? He explains that he, alone among enquirers, doesn't proceed from 'any other principle than the infinite perfections of God' (/108). (Cp. Meditation 4: 'it seems to me that I now have before me a road which will lead us from the contemplation of the true God...to the knowledge of the other objects of the universe' (/172). Meditation 5: 'the certainty and truth of all knowledge depends alone on the knowledge of the true God' (/185). *Principles* 1.24: 'from the knowledge which we possess of His nature, we pass to an explanation of the things which He has created' (/229). Though the theological garb of the explanation shrouds its message, the relevant structural implication can be elicited by bringing the preceding words into contact with what Descartes writes in Rule 1.

Investigators who fail to follow a properly 'scientific' line — they 'erroneously compare the sciences...with the arts' (/1) — are party, as a result, to the mistaken belief that science comprises a multiplicity of essentially disparate topics which 'ought to be studied separately, each in isolation from all the rest' (/ibid.). Thus, again, those Descartes criticises pursue their specialist investigations of the sub-terrestrial realm (metals, mines), the sub-lunary terrestrial arena (plants, fields), and the superlunary sphere (sun, stars), without any concern for 'universal Wisdom' (/ibid.). By proceeding in a genuinely 'scientific' manner — or so Descartes informs us in the opaque sentence lately quoted from Discourse 5 — he has successfully overcome this objectionable and distortive compartmentalisation.

The contrast offered here by Descartes sets the unifying powers of scientific cognition against the 'fragmentation' of subject-matters in which an artistic approach results. The example brought verifies that the exercising polarity is indeed that of unity and multiplicity. Descartes observes that one who wishes to become a proficient harpist had best devote himself single-mindedly to that end. Although such a one might remain totally inept at 'agricultural operations' (/ibid.), that would not preclude his being accounted consummate in the musical field. Indeed, a concurrent attempt to develop a non-musical manual skill, e.g. at plowing, is apt to undermine his hard-

won dexterity with the instrument. By contrast, while a scientist might lack specialist expertise in this area or that, any such lacuna definitely detracts from rather than enhances his capability as a scientist. Though we should not forget that in the seventeenth century polymathy wasn't viewed as an unattainable ideal, it is quite true that limitations of time and energy make scientific specialisation unavoidable in practice: 'It is true as regards the experiments which may conduce to [scientific knowledge], that one man could not possibly accomplish all of them' (Discourse 6/126). But Descartes' point is that 'the knowing of one truth [does not] have an effect like that of the acquisition of one art and prevent us from finding out another' (Rule 1/1-2). Accordingly, even if specialisation is practically unavoidable, it is occasioned only by the mentioned limitations. Descartes' otherwise murky appeal to God points clearly to this conclusion — God being free, *ex hypothesi*, from the limitations under which men labour; limitations which lead them, willy-nilly, to specialisation in science. I shall eventually show that Descartes' reference to God here plays an essential role in his positive position. As a stop-gap until then, those unhappy with the theological allusion can be placated by pointing out that Descartes could informally achieve much the same effect at this stage via the observation that while the pooled knowledge of a group of scientific specialists or research team is better than that of any one of them — 'many can see more than a single man' (Discourse 6/123) — the idea of a joint harp-playing effort is absurd.

A link is thus forged by Descartes between the dependence of artistic prowess on 'an exercise and disposition of the body' and the genuine plurality of the arts. Also, a conception of the sciences as essentially multiple, rather than multiple because of the unfinished state of knowledge, is condemned. But though both claims revolve about the formal dichotomy of unity and plurality or multiplicity, and though Descartes writes as if an internal connection exists between them, the reader would have to be excused for failing as yet to see the light. And indeed, I have myself been somewhat lax in describing the Cartesian position, specifically in saying, without reservation, that Descartes' objection to scientists who fail to heed his

counsel is that they take their cue from the artist. But isn't it one thing to follow an artistic line, quite possibly another wholly different thing not to follow a scientific line? If so, what justifies Descartes' equation of 'artistic' and 'non-scientific', i.e. his treatment of 'artistic' and 'scientific' not only as exclusive but also as exhaustive alternatives?

The difficulty resolves into two parts. First, how does Descartes' (acceptable) claim that the arts constitute a genuine plurality — and hence that artistic specialisation is not specialisation *faute de mieux* — support his contention that scientific knowledge is of a piece? May not the arts and the sciences, perhaps for unconnected reasons, constitute genuine pluralities? Second, while the activities of the harpist or tiller clearly 'depend upon an exercise and disposition of the body', on what grounds can the same, or indeed anything remotely similar, be said of the non-Cartesian scientists who investigate 'the virtues of plants, the motions of stars, the transmutations of metals'? But Descartes specifically criticises the latter for emulating the artist.

It is quite true that the thesis of unified science cannot validly be rested on (i) the fact of artistic plurality and (ii) the non-identity of arts and science: these are perfectly compatible with a real multiplicity in the scientific arena. But attention to the texts reveals that Descartes does not perpetrate the fraudulent transition. Though he writes in Rule 1 that 'all the sciences are...interconnected' (/2), the proposition has a transparently *regulative* cast. Why 'must' (/ibid.) we believe that science is unified? Because such a belief renders our scientific task 'much easier' (/ibid.). And indeed, for the following reason, shouldn't Descartes vocally dissociate himself in principle from the logically objectionable transition? In light of the sharp ontological dualism of his mature metaphysical stand, it would be quite natural for him to allow the science of mind to be as distinct from the science of body as the mental is from the corporeal, i.e. totally distinct. At Rule 6 (/21), we in fact find Descartes sketching how the (scientific) approach he advocates can effectively establish this root *multiplicity*. And plainly, it would be a mistake to argue that science is unified because a properly scientific approach establishes the sharp diversity in being. One might as well argue that divorce

proceedings, by legally dis-uniting a couple, really show them to be indissolubly bound together.¹

I do not deny that Descartes inclines towards a thesis of unified science. But his critical point is separable from any iron-clad commitment to it, viz. the point that *the kind of multiplicity* which characterises the arts does not obtain in respect of the special sciences. If, in other words, a theorist wishes to establish that science is not fragmented, he must have more to enter in testimony than the genuine diversity of the arts.

While disposing of the first part of the difficulty, this leaves the second part intact. Descartes lays the blame for an illicit and damaging fragmentation of knowledge about the world into specialised compartments on a failure of investigators to observe the distinction between the character of scientific cognition and the character of intelligent activity in the arts. The following substantive questions are still orphans of response. (A) What is the mechanism of fragmentation in the arts? (B) How does the mechanism figure in and affect the activities of those to whose scientific results Descartes takes exception? In what sense do the latter err *because* they emulate the artist?

3. *Fragmentation and the senses: a structural identity*

Descartes comments on the mechanism of fragmentation in this passage:

take our investigations of those sciences conducive to the conveniences of life.... There we may indeed expect to receive the legitimate fruits of scientific inquiry; but if, in the course of our study, we think of them, they frequently cause us to omit many facts which are necessary to the

1. There is a reason for Descartes' failure explicitly to dissociate himself from the transition. Given that God acts in accordance with 'a rational plan', it would seem that, from the divine point of vantage, the character of the mental realm and of the material realm should be mutually adjusted. This is one point on which Descartes is taken up by his non-dualistic successors.

understanding of other matters, because they seem to be either of slight value or of little interest (Rule 1/2).

A paraphrase to clear up the appositional log-jam is in order. Descartes is distinguishing a properly scientific approach to a subject-matter from an approach, which may be called 'applied', aimed at specific results. His warning is that if in the course of pure scientific activity the enquirer allows himself to be guided by the desire for such results, he will be driven, willy-nilly, to be distortively selective *vis-à-vis* the character of the subject-matter.

We are again in the orbit of the unity/plurality dichotomy. Those who 'omit' facts 'necessary to the understanding of other matters' are, we can agree, fragmenting what may in itself be an integral, a seamless or internally unified, subject. However, Descartes is more helpfully voluble here than before. He tells us that such omissions, and hence such fragmentation, will occur if we are actuated by particular interests, values, aims, purposes, or goals: 'there is nothing more prone to turning us aside from the correct way of seeking out truth than this directing of our inquiries, not towards their general end, but towards certain special investigations' (ibid./ibid.).

The compartmentalisation of an integral subject-matter is then a function of specific interests, goals, values, aims, etc. This provides a deeper understanding of the preceding results. The harpist develops a characteristic dexterity to the exclusion of other motor skills, indeed even at their expense, with the aim of producing a certain sound. Because of the value placed on that product he bends his efforts to achieving a mastery of the instrument, a mastery which prevents him from becoming adept at handling the plow.

A crude answer to (A) is now in hand. The arts are genuinely multiple because they are individuated by reference to goals and purposes. Different arts may therefore involve the same kinds of objects — when these are exploited in each for different ends — and different kinds of objects may fall within the sphere of activity of a single artist — when he exploits these in furtherance of a single purpose. By contrast, the (pure) scientist approaches his subject-matter in a spirit entirely different. If pressed, one can assign a goal or purpose even to him: the achievement of 'good understanding, or uni-

versal Wisdom' (ibid./ibid.); 'that pleasure which is found in the contemplation of truth' (ibid./ibid.); 'to increase the natural light of reason' (ibid./ibid.). But these are 'goals' in a maximally attenuated sense, since to say that the scientist does what he does in pursuit of wisdom or for the sublime intellectual satisfaction of beholding the lustrous countenance of truth is really to deny that he does it for the sake of some definite, distinctive, purpose or goal.

How does this response to (A) assist in answering (B)? It isn't hard to generalise the above description of the arts to the *applied* sciences, for the difference between artist and applied scientist takes off from a more basic similarity: both are actuated by interests, purposes, goals. (Thus, in a rather ugly, but appropriate, phrase, one frequently hears talk nowadays of 'state of the art technology'.) While the goal of the artist, virtuoso ability on the harp say, is pursued for its proximate product, the production of a certain quality of sound, that of the applied scientist is sought for some more distant reason. One who develops a technique for alloying metals would do so in aid of some end, like effectiveness in battle, which is facilitated by the product. In both cases a goal or purpose — a 'particular end' (ibid./ibid.) — defines or individuates, and thus results in the kind of differential weighting of the facts that Descartes thinks to be ruinous in science proper.

So far so good. But the investigators Descartes seeks to correct in the name of science proper are not necessarily interested in the solution of technical problems. What is it about their procedures that draws Descartes' fire? More specifically, how does the preceding account of the nature of the arts and the applied sciences reapply here?

Are we correct in assuming that Descartes believes his objections to reapply? We are, obviously. Otherwise, his explanation of the plurality of the arts would come unstuck from the criticism he offers of those in his day who viewed themselves and were viewed by the community at large as genuine scientists on the grounds that they fail to win through to 'universal Wisdom'. Our task is therefore to generalise what Descartes says of the artist and of the applied scientists so that the result will bear critically on those enquirers into

the world who cannot fairly be classed either as artists or as applied scientists and with whose views Descartes is dissatisfied. Descartes' criticism here mustn't reduce to his mere dissatisfaction with the substance of these views. Like logicians, even Cartesian scientists are apt to disagree among themselves. So the point has got to be that the objectionable views are not of the right kind; that they miss the mark because they are produced by a mistaken procedure, an inappropriate style of cognition.

The generalisation sought must satisfy three conditions. (1) In the following sense, it has to base itself squarely on Descartes' claim that the activities of the artist and the applied scientist 'depend upon an exercise and disposition of the body'. The generalisation cannot rise to a level of abstraction on which the literal application of the quoted description is restricted to the cases of the artist and the applied scientist. (2) Complementarily, the point, once generalised, must provide a viable ground for pressing the charge that the procedures employed by those Descartes reproves result in distortive fragmentation of a subject-matter. (3) Also, it has to follow from the generalised point that sense-based beliefs run afoul of the condition of rational acceptance; that they count for some structural or constitutional reason as no more than 'probable', and hence fall short of scientific status. Can a satisfactory generalisation, at once text-based and text-respecting, be found?

Signs of our quarry are faintly visible in the contrast Descartes adumbrates in Rule 3 between 'intuition' — 'the conception which an unclouded mind gives us so readily and distinctly that we are wholly freed from doubt about that which we understand' (/7) — and 'the fluctuating testimony of the senses' (/ibid.). Since the contrast immediately follows a slighting reference to 'obscure and ill-comprehended theories, at which [the learned] have arrived merely by probable conjecture' (/6-7), Descartes is therefore saying that those misguided scientists who end up reposing trust in probabilities do so because they fail to cognise 'intuitively', relying instead on 'sense-testimony'. Are there any links between *this* contrast and the contrast of 'artistic' and 'scientific' intellectual activities in Rule 1? Does what

Descartes calls 'the fluctuating testimony of the senses' point towards the desired generalisation?

Before defending an affirmative answer, let me pause for an orienting comment. My search for structural data was prompted by the fact that the sceptical materials of Meditation 1 do not by themselves challenge the conditional proposition. But note how, in the lines quoted above, Descartes describes those who defer to 'the testimony of the senses' as contenting themselves willy-nilly with 'probable' results, and note that the description is applied quite apart from any asseverations about deception, illusion, dreaming, and so on. To the extent that the earlier text can legitimately be brought to bear in amplifying the later one, my broad claim about the argumentational architecture of the first meditation is reconfirmed. And once, particularly in respect of the final condition of adequacy, the desired generalisation of what Descartes says in the *Rules* is achieved, i.e. once his remarks in the *Rules* are connected explanatorily to the negative thesis about sense-perceptual cognition in the *Meditations*, the claim will have been fully secured.

Keeping this in mind, we return to the main line of discussion. The issue immediately outstanding is whether Descartes' claim that defective or 'probable' results are reached by those who rely on the senses has any real links with his account of the 'artistic' mode of activity. The positive answer desired emerges if we scrutinise Descartes' comments about the testimony of the senses.

What is the force of the assertion that sense-experience supplies 'fluctuating' testimony about the world? The answer is hinted at by the remark in the fourth paragraph of the opening Meditation that 'the senses sometimes deceive us concerning things which are hardly perceptible, or very far away' (/145). (In addition to the unusual use of 'action' in the work's first paragraph, this constitutes the second glimpse alluded to of a structural strain in Descartes' reasoning.) It is an internal or structural characteristic of sense-experience — like Descartes, I have the visual mode of perception in mind — that the cognising subject is externally placed *vis-à-vis* the object experienced. The object, to adapt Descartes' wording, may be 'very far away'; it may be 'close by'; it may be 'clearly in view'; it may be 'hardly

perceptible'. *All these possibilities are open even if the senses are in perfect working order and the conditions of perception — physiologically, psychologically, and optically — ideal.* And plainly, the self-same object may stand simultaneously in all these relations to different perceivers.

The discussion of the plurality of the arts comes into its own here, helping us to home in on the precise structural content of these uncontentious facts. Artistic plurality was explained by noting that the arts are individuated in terms of goals, purposes, values, interests, etc. *This gives a formal parallel with the relational structure of the perceptual nexus.* It does so, moreover, in a way which explains why Descartes' acceptance of artistic plurality is not matched by an equal tolerance of specialisation in science.

The artist handles his subject-matter in some one way, to the exclusion of other ways, because his approach to the subject-matter is dominated by a specific purpose. Solely by examining the subject-matter, it could not therefore be decided what his art consists in. Formally, we may put:

$$A = G(s)$$

The artist's purpose or goal G takes his subject-matter s into the activity A that individuates his art. The goal of producing a sound of a specific quality determines that the harpist will strive to develop a characteristic dexterity on his instrument. Similarly, the sense-perceptual cogniser's vantage point V *vis-à-vis* the perceived object o determines R , the representative content of his conscious state. Formally:

$$R = V(o)$$

Since in both cases a factor — G , V — *extraneous* to the subject-matter — s , o — plays a selective role, neither A nor R can be determined solely by examination, however minute, of s or o . It is in this formal sense that the mode of cognition of a sense-perceptual cogniser qualifies as 'artistic' in nature.

The following vital difference separates the cases. No *criticism* is implied by the fact that an artist's art is defined essentially by reference to a selective factor external to his subject-matter: this is what art is. But, for Descartes, the fact that perceptual testimony is a

function of a selective factor counts against the testimony's adequacy.

There is no pressure on us immediately to decide whether sense can be made in the perceptual case of something better, viz. a mode of cognition for which R is brought into co-incidence with o. Though this is a crucial requirement for Descartes, the important point here and now is that the *descriptive* content of his negative thesis — that perceptual cognition is structurally selective, and hence yields less than a full representation of an object so cognised — is arguably correct.

4. *Sense uncertainty*

A generalisation of Descartes' account of 'artistic' cognition was sought which would successfully explain the exception he takes to the procedures employed, and hence to the results reached, by contemporary non-Cartesian enquirers into the world. It was requested of the generalisation that it make sense of the contention that the latter go astray *because* their approach is 'artistic' in nature, and not merely chastise them question-beggingly for failing to convert to Cartesianism. The generalisation was also asked to perform a further service: to provide insight into Descartes' structural critique of sense-employing cognition in the *Meditations*. The desired result is implicit in the sketchy remarks concluded just above. By elaborating, a point on which the need for more instruction was felt with especial poignancy will be amplified, viz. the relevance of Descartes' characterisation of artistic activities as depending on 'an exercise and disposition of the body' to the evaluation of the senses as instruments for achieving knowledge. But before filling in the sketch, I want to show that Descartes' mature views about certainty and uncertainty or probability indeed take up where the discussion in the *Rules* (prematurely therefore) breaks off.

Permit me to enunciate the large point in advance. Descartes' major claim in the *Rules* is that scientific knowledge will be forfeited if the subject's mode of cognition, because it is selective *vis-à-vis* the object cognised, results in a fragmented portrayal of the object's

unitary character. When we examine what Descartes has to say about certainty in his mature period, it comes to light that the uncertainty of sense-based beliefs — and hence their rational unacceptability in accordance with PD — is understood *ab initio* by reference to the structurally unavoidable selectivity of sense-perceptual representation. There are not, in short, two distinct and logically consecutive steps in Descartes' thinking: first, the neutral definition of 'certainty'; second, the logically posterior assessment of whether or not sense-based beliefs qualify as certain. Rather, Cartesian 'certainty' is expressly keyed to what sense-based beliefs are not.

Examine these characteristic Cartesian comments about certain knowledge. Descartes explains in Discourse 2 that judgements are certain if I 'accept in them nothing more than what was presented to my mind so clearly and distinctly that I could have no occasion to doubt it' (/92). Those beliefs which '*may [not] be brought within the sphere of the doubtful*' are entitled 'certain' at the start of Meditation 1 (/144). In Meditation 5 a belief grounded in such a fashion that 'no contrary reason can be brought forward which could ever cause me to doubt of its truth' (/184) is said to be certain. In *Replies* 2 a cogniser is denied the right to claim certainty so long as '[a doubt] may come up' (/39). And at various places — e.g. *Replies* 2/41, *Replies* 6/145 — Descartes conjoins 'certainty' with 'immutability'.

At the intersection of these overlapping formulations is the point that a belief is certain providing it is so based that there could be no subsequent development which would lead the (rational) cogniser's opinion to waver in the slightest. Beliefs which fill the bill are quite naturally described as 'irrevisable'. An analytic formulation of irrevisability, brought to bear by its author on the Cartesian case, follows.²

A proposition *p* is irrevisable for a subject *S* at a time *t* if and only if (i) *S* is justified in believing *p* at *t* on the basis of some set of evidential propositions, *e*, and (ii) there is no time *t'* and possible *e'* such that *t'* is later than *t*, *e* is a subset of *e'*, and *e'* fails to justify *S* in believing *p* at *t'*.

2. I am simplifying J. Tlumak's formulation in 'Certainty and Cartesian Method', in M. Hooker, ed., *Descartes: Critical and Interpretive Essays* (Baltimore and London: The Johns-Hopkins University Press, 1978), p. 46.

Obviously, sponsors of this analysis (and, *mutatis mutandis*, of its variants) assume the Cartesian distinction between revisable and irrevisable beliefs to be a distinction among beliefs based on data of a uniform kind. By focussing attention on Descartes' differentiation of 'active' from 'passive' and of 'scientific' from 'artistic' cognition, I have been toiling to explain that the assumption is exegetically indefensible. Descartes would not argue, in the conditional mode, that a belief sense-perceptually acquired is revisable, i.e. uncertain, if the evidence for it can be augmented so that the believer's justification is weakened or undermined — a pattern of argument which would require him to consider each belief in a case-by-case fashion to see whether or not countervailing evidence does in fact come to light: 'an endless undertaking' (Meditation 1/145). Rather, he would argue, categorically, that because the belief is sense-based, the evidence for it is in principle capable of being augmented; sense-perceptual evidence is by its very nature evidence-of-an-augmentable-kind, and hence a belief acquired perceptually is by its very nature uncertain.

It is more than merely interesting to note that the analytic rendering of irrevisability lends itself to exploitation in support of this very point. To claim that a belief about some (objective) state of affairs engendered at a specific time is certain, i.e. irrevisable, just in case no assailing evidence could later come to light is to imply that the evidence for the belief is all-in at that time. (I speak of course of *direct* evidence. Indirect evidence may always come to light later.) But what could this mean if not that there is no temporal or spatial vantage point displaced from that very spatio-temporal vantage point at which the belief is acquired and from which what the belief expresses could relevantly be examined or checked? (Note how the slightly picturesque notions of vantage point and displacement are being enlisted to give body to what is expressed by the rather aseptic analytic phrase 'later time and additional evidence'.) Doesn't this in turn mean that the initial evidential basis for the belief is non-selective, non-fragmentary? If the evidence is all-in, then *all of it* is in. Doesn't it follow that no sense-perceptually grounded belief about the world could be certain? For if it isn't part of what we immediately

understand by 'acquiring a belief sense-perceptually' that, for example, a multiplicity of sense-perceiving subjects could directly acquire the belief at one and the same time, then it surely is a not too distant consequence of what our immediate understanding of the phrase involves. If so, the evidential basis of any one of the subjects could not be complete or non-fragmentary. (Contrast this with the case of a mental state like pain. There is always one subject — the subject in pain — whose position *vis-à-vis* the content of the belief that pain is felt is evidentially superior to the position of any other subject who may subscribe to the belief.)

My reason for saying that this is more than merely interesting should be sufficiently plain. Revisability, as analytically defined, mirrors the very structure of that kind of cognition which delivers what Descartes classifies as uncertainties or probabilities. *Pace* the bulk of interpreters, there are not two steps here: first, to define revisability in a cognition-theoretically neutral way; second, to ask whether beliefs gained by the perceptual cogniser are revisable. This reverses the flow of Descartes' thinking.

To facilitate the discussion which is to come, let me clothe the above claims about revisability in a more formal dress. For Descartes, a subject's cognitive condition about some truth-evaluable matter is one of 'uncertainty' when there are, for him, meaningful counterfactual possibilities of gaining direct evidence bearing on that matter. In other words, what the subject believes counts as 'uncertain' when there are positions *vis-à-vis* the state of affairs represented by the proposition which expresses the belief's content, different from the position in which the subject happens to be when he acquires the belief, at which additional evidence no less (and no more) relevant to the truth-evaluation of the proposition than the evidence he in fact relies upon can be (and, for him, could have been) acquired. Now it follows directly from the relationality of the perceptual nexus that, no matter what perceiving subject you care to choose, there are always positions distinct from his at which evidence about an object or state of affairs can be garnered, evidence as relevant to the truth-evaluation of the proposition he believes as the evidence he in fact relies upon. That it follows is illustrated, again, by the fact that no

one among a group of subjects all of whom directly acquire a belief about the world by using their senses may have evidence which is superior to that of any other — albeit each of them would unreflectively be said to be in an optimal perceptual position; in as good a perceptual position *vis-à-vis* what the proposition expresses as he could be. This state of affairs is exemplified every time a number of perfectly-sighted subjects, sitting around a table in a well-lighted room, acquire the belief that there is a potted plant on the table: though each subject has the best (perceptual) evidence he could want, the evidence he has differs from that of any other.

We return to consider whether a satisfactory generalisation has been supplied. Are the three conditions of adequacy satisfied?

(1) The generalisation was required to extend Descartes' claim that the intellectual activities of the non-scientist 'depend upon an exercise and disposition of the body' beyond the cases of the artist and the applied scientist without excessively attenuating the sense of the phrase. Since the content of sense-testimony is quite literally a function of the body, the condition is met. In terms of the formalities of section 3, the factor V gives expression to the role played by the sense-perceiver's body — by its dispositions and movements — in determining the representative content of his conscious state. For the sake of those who regard the link here as forced, it is worth pointing to texts where Descartes uses the language of bodily dependence to explain the constitutional ability of the senses to lead the cognising subject astray. During the physiological speculations of Meditation 6, to give one example, he observes that the 'impressions' received by the subject are as they are because of how 'the body [is] disposed' (/196). For this reason a large object at a distance and a small one in the vicinity may have the same visual character. And if the leap from the *Rules* to the *Meditations* still seems truth-defying, it may be noted that the point made in the early work appears again in the transitional *Discourse*. At Rule 12 Descartes remarks that 'all our external senses...are part of the body' (/36). The bodily dependence is cashed directly in terms of the notion of passivity. Sense-based cognition is 'properly speaking...in virtue of passivity alone' (/ibid.). Similarly,

Descartes' wording in Discourse 5 implies synonymy between 'senses' and 'external passions' (/115).

(2) As requested, the generalisation does justice to the fact of fragmentation. The artist's specific interest G results in a differential weighting of the features of the subject-matter s : even though s is held constant, a change in G will, that is, induce a change in A . *Mutatis mutandis*, the fact that the sense-perceiver stands in one relation from among a large set of possible, cognitively equipollent, perceptual relations V to an object o results in the promotion of certain of the latter's features over others: though o remains constant, a shift in V will, here as before, yield a corresponding alteration in R . In what can now be appreciated to be Descartes' very apt word, sense-perceptual testimony is by its nature 'fluctuating'. And, as I mentioned, it is at least plausible to say that the variability of R is in this case distortive *vis-à-vis* the invariant character of o .

(3) Finally, the generalisation was asked to make sense of Descartes' claim that perceptual testimony betrays the scientist's needs. This is accomplished by the link described between uncertainty and perceptual selectivity.

5. *The non-realist semantics of probabilities*

To understand Descartes' view that a doxastic policy informed by PD requires withholding belief from standard factual propositions, it is vital to recognise that the uncertainty Descartes associates with such propositions is truth-involving. Descartes' structural analysis of perceptual cognition, as just retrieved, establishes that even under ideal circumstances the subject's belief in any proposition of this kind is based on partial or fragmentary evidence. It should now be clear that the evaluation of these propositions as untrue, which flows on my construal from the denial that they can be known 'with complete certainty', does not imply them to be false in the normal sense.³

3. To be sure, some of these propositions may be (known to be) false, viz. those disconfirmed by the senses. In formulating PD, Descartes distinguishes matters which

Rather, they are propositions which cannot be assigned the truth value true. Descartes' own word here is 'probable'. But since this word is also unstable, let us agree to say that the mentioned propositions are *intrinsically probable*.

Once and for all to snuff out the natural urge to maintain that the evidential incompleteness which Descartes charges against the senses only has practical effects on truth evaluation, and is therefore compatible with the truth of standard factual propositions, it is necessary on Descartes' behalf to supply a fuller account of these propositions on which the mentioned partiality of evidence works out as a partiality of meaning, i.e. works out as having meaning-theoretic effects on truth value. Though I am quite conscious of the danger of anachronism in the retroactivation of modern meaning-theoretic materials here, I nevertheless believe that the essentials of just the account Descartes requires are available in some recent work by M. Dummett.⁴ In fact, the difficulties in Descartes' position which are set in relief when his views are reconstituted in Dummett's terms — difficulties to be glimpsed in the next section — are, I shall argue, the very difficulties he fails to cope with.

The key is Dummett's distinction between reductive and non-reductive forms of anti-realism about material objects; or, in meaning-theoretic rather than ontological terms, the distinction between reductive and non-reductive forms of anti-realism about material objects propositions. In the eyes of the theorist of meaning, the phenomenalist is a reducer, maintaining that propositions about material things can be translated without cognitive impoverishment into (sets of) sense-datum propositions. We saw that Descartes' reasoning in Meditation 1 is not phenomenalist in character either as concerns SA or as concerns PD. So in the absence of a non-reductionist anti-realist option to call upon, there will seem no

are 'not entirely certain' from those which are 'manifestly...false' (Meditation 1/145). Since agreement can be assumed that propositions known to be false are rationally unacceptable, I am concentrating attention on cases which fall under the first phrase but not the second. So does Descartes.

4. 'Realism', essay 10 in *Truth and Other Enigmas* (London: Duckworth, 1978).

alternative from a meaning-theoretic perspective but to represent Descartes as a realist about the propositional elements of standard material object discourse. We are by now well-versed in the undesirable consequences of such a characterisation. One who sees Descartes as a realist here will be driven, like it or not, to construe PD via the truth-neutral notion of uncertainty. He will be driven to this for the obvious reason that if Descartes is a realist — believing a material object claim to have whatever truth value it has quite apart from the experiencing subject's ability to determine it — then he can be described only on pain of outright inconsistency as maintaining that the rational subject is obliged to reject each such proposition because of its untruth. Immediately, an insuperable obstacle blocks the way towards understanding why Descartes thinks himself to be warranted in asserting CP*. If material object propositions might be true, then his refusal to allow them entry to a properly 'scientific' description of reality must be due to dogmatic prejudice — e.g. (as is frequently alleged) to an unargued preference for a mathematical style of representation.

The obstruction is removed once the non-reductionist anti-realist option is advanced. Reductionism counts according to Dummett as 'an intrusive feature of the anti-realist position',⁵ the hallmark of anti-realism about material object propositions being advocacy of the view that an asserted proposition of this kind cannot categorically be said in advance to be either true or false, and may under certain conditions have to be evaluated as neither. An examination of why the anti-realist plumps for this line will reveal the Cartesian reasoning displayed above.

For a realist about material object propositions, meaning is given by specifying the conditions under which a proposition of the class is true. Meaning is tied by the anti-realist not to truth-conditions but to conditions of assertion: to explain meaning one specifies the evidential conditions which fully justify a speaker in asserting the proposition in question. Suppose I state 'The table in the next room is blue' in the absence not only of direct observational evidence (the

5. 'Realism', p. 157.

walls are opaque) but also of such indirect evidence as might be supplied me by the observation-based testimony of a subject better situated. On the anti-realist's understanding the proposition's assertion will be indefeasible just in case I am fully justified in asserting a conditional like 'If I were in the next room I would see a blue table'. Now the anti-realist is obviously barred from holding that what justifies the conditional's assertion is the presence of a blue table on the far side of the partition; this would amount to abdicating anti-realism by tying meaning to truth-conditions as distinct from conditions of assertion. Since in the evidential circumstances described the conditional must be assessed by him as lacking a definite truth value, the same therefore has to be said about the asserted proposition.

With a single change, this transforms into Descartes' negative thesis about standard factual propositions — the thesis expressed via CP* and via the claim that PD rules against the acceptance of these propositions because of their truth-involving uncertainty. Whereas, for the anti-realist introduced, evidential conditions exist under which a material object proposition may justifiably be asserted — viz. those conditions of observation which would unreflectively be accounted 'optimal' — Descartes holds that because of the very structure of the nexus of sense-perception *sense-perceptual evidential conditions fall short in principle of ever fully justifying the assertion of any proposition of the class*. Even when by our unreflective canons the subject's evidential condition is as good as it could be, he is still not in possession of the evidential data required for justifiably asserting the proposition in a wholly unqualified way. The upshot is plain. No asserted factual proposition about the world whose meaning is specified in terms of sense-perceptual evidence ever counts as more than probable. Assuming that the meanings of such propositions, if specified in sense-perceptual terms, cannot be specified in some other way, it follows that all asserted propositions of this kind are, in the phrase promulgated above, intrinsically probable.

The formula ' $R = V(o)$ ' can be pressed into service again to clarify the upshot. That even the optimally-placed sense-perceiving

subject must, qua sense-perceiver, take up one vantage point V as distinct from and necessarily to the exclusion of other possible and équally advantageous vantage points, implies that his evidence concerning the state of affairs o about which he acquires a belief (makes an assertion) is always partial. The representative content R of his state of consciousness gives no more than a fragmentary picture of the state of affairs.

Reconsider our group of perfectly-sighted perceivers, each of whom acquires the belief, and is therefore prepared if called upon to assert, that there is a potted plant on the table. Because the evidence of any one of the group differs from the evidence of any other — a result of the fact that each occupies a different vantage point V with respect to the relevant object o — and given that no one member of the group possesses evidence superior to that of any of his fellows, then it seems to follow, notwithstanding that the conditions of belief-acquisition would unreflectively be accounted optimal, that the evidential basis of each falls short, and hence that the proposition, when asserted, must be assessed as no more than probable.

That this genuinely echoes Descartes' thinking will be clear if we again peruse the kinds of claim he makes about uncertainty. One who relies on his senses, Descartes tells us, acquires knowledge which is 'imperfect'; the object is never 'completely known' (Rule 2/3) by a subject whose basic evidence is sense-evidence. And, Descartes adds, 'we cannot attain to a perfect knowledge in any such case of probable opinion' (ibid./ibid.). Consider also how, in *The Search After Truth*, a work closer than the *Rules* in its texture and inflections to the *Meditations*, Descartes pokes fun at Polyander, the commonsensical 'everyman', by making him say this: 'I am well aware that the senses sometimes deceive...; [e.g.] when they are too far from the object...; and in general when they do not act freely according to the constitution of their nature' (/313). How exactly does the 'in general' claim take in the earlier, specific, one? Would Polyander have eyes which operate to detect objects only at a distance of, say, eighteen inches? Descartes' point is that the senses are deceptive even when they function naturally, the problem affecting them arising from their very constitution and mode of operation.

6. Reconciling realism and anti-realism

To judge by the recent literature, an anti-realist position about material object discourse is a live option today: the debate has only begun to be joined, and the situation in the field is one of lively disagreement. To the extent that Descartes' negative appraisal of the deliverances of the senses lends itself to reconstitution in these terms, it continues therefore to merit our analytic attention. If allowance is made for Descartes' (to us archaic) style of discussion, his treatment can even in fact be assessed approvingly for the depth it achieves. But difficulties of interpretation and evaluation alike arise because Descartes' structural account of perceptual cognition is wrapped up in a wider realist package. So far as *bona fide* scientific knowledge is concerned, Descartes' sympathies are unreservedly realist in character.

Preparatory to treating Descartes' positive conception of knowledge, I want to turn aside an objection that is sure to be pressed, viz. that if the preceding construal of Descartes' attitude to ordinary factual propositions is accepted, then full-blooded Cartesianism has to be viewed as an incoherent mixture of anti-realism and realism about factual discourse. While realist and anti-realist elements are indeed combined by Descartes in an exceedingly volatile way, I shall argue that his position isn't internally incoherent on this score. The problems which arise are problems with Cartesian realism; they do not affect the negative critique mounted against the senses. The problems are in other words problems which *specifically* affect Descartes' positive, realist, conception of things.

Transcribed into our modern terms, Descartes' contention is that because the semantics of standard factual propositions are non-realist, these propositions are scientifically deficient. Properly scientific knowledge of the world requires that the relevant propositions be known with certainty, but the augmentability-in-principle of the direct sense-evidence for a standard factual claim leaves it ever uncertain or 'probable'. It may however seem that what Descartes labels 'certain knowledge' and what he describes as 'probable knowledge' are closely related species of a single genus, or even minor variants of

a single species. This will appear to be the case if certain knowledge is represented as capable of being reached by extrapolating from a base of probable knowledge — a possibility which presupposes that the two are of the same kind. Reconsider the position of the sense-employing cogniser *vis-à-vis* an object. Because, qua sense-perceiver, he is stationed at one place from among many which might be taken in relation to the object, his evidence about it is fragmentary. Doesn't it follow that by successively occupying the various possible places in a systematic way he could totalise the evidential fragments up to coincidence with the object's character? In a more sophisticated terminology, doesn't it follow that the optimal evidential condition can be described as the limit of the inadequate evidential condition?

The severe problem that would confront Descartes were this his considered view concerns the *relation* between the scientifically inadequate conception of reality laid up in standard factual propositions, on the one hand, and what Descartes would allow into full-fledged science, on the other. Descartes is here said to maintain that the real meaning of a standard factual proposition about the world is given by what would appear in a properly scientific representation of that reality which the standard proposition describes. This is inconsistent with the thesis that the propositions comprising this mode of representation are intrinsically probable. If they are intrinsically probable — if their meaning-specifications are such that no assertion of any of them can definitely be assigned the truth value true — then it cannot consistently be said that representations susceptible of definite truth evaluation as true give their meaning.

The thesis that standard factual propositions are intrinsically probable is not stated by Descartes in so many words; I have teased it out of a number of passages each of which says something less. So the fact that the constellation just described is inconsistent might be regarded as a flimsy basis for refusing to pin it on him. The attribution ought however to be resisted for a more compelling reason. If Descartes did indeed maintain that the real meaning of a standard factual proposition is given by what would appear in science, then the argument for the unacceptability of normal beliefs would be a fatality. Crucial to the validity of that argument is the claim that a

proposition expressing the representative content of a perceptually acquired belief is uncertain in the truth-involving sense, i.e. is intrinsically probable, *because of its very nature*. Should we allow ourselves to suppose that these propositions aren't sharply separated from representations which pass scientific muster, one of two things follows. Either the 'uncertainty' of the former transposes to and contaminates the latter, or else the rejection of the former on the grounds of 'uncertainty' loses its justification. Clearly, then, there must be enough difference between propositions of a standard factual type and representations of the type suitable for science to enable Descartes validly to argue for the differential untruth of all of the former.

Whatever the instabilities in Descartes' position, it therefore seems plain to me that he recognises that scientific modes of representation cannot — and consequently recognises that they do not — discipline non-scientific modes by revealing the realist basis of the latter, where by 'reveal' is meant 'disclose what is implicitly there from the start'. Once granted, this sets one of Descartes' most basic difficulties in sharp relief. If scientific modes of representation do not, in the explained sense, 'reveal' the meaning of non-scientific modes, what obligation binds the rational subject to replace the latter by the former? Descartes states that perfect knowledge is impossible where there is probable opinion. What 'imperfection' in our ordinary beliefs is made good by perfect knowledge? How exactly could the one mode of cognition serve to discipline the other if they differ in kind? A table is one kind of thing; a chair, another. But while it is quite true that no table is a chair (cp. perfect knowledge differs from probable opinion) it would be absurd to characterise a table as a poor excuse for a chair (cp. to characterise probable opinion as a defective approximation of perfect knowledge).

Because of this difficulty, the temptation will strongly be felt (it was, we shall see, not resisted completely by Descartes) to represent adequate knowledge as generically uniform with inadequate knowledge, so that it makes at least *prima facie* sense to speak of measuring the one by the standards of the other. But if we take entirely seriously the parallel between the art/science dichotomy and the probabili-

ty/certainty distinction, such a formulation of the relation appears highly questionable. Descartes himself asserts that 'not all the arts can be acquired by the same man, but...he who restricts himself to one, most readily becomes the best executant' (Rule 1/1). It would in other words be ludicrous to demand of the harpist that he seek mastery of the piano, violin, etc., let alone plow, as a condition of genuine virtuosity with his instrument. So if inadequate modes of representation have the degree of autonomy from adequate modes that art has from science, the corresponding demand should be every inch as ridiculous.

Because there is only a half-analogy between the cases, one is entitled to hold out some hope for Descartes here. It is, I suggest, the link between 'active' and 'passive' that we should concentrate on in seeking an exit from the *impasse*. While extended discussion of the 'active' cognitive *ensemble* will be deferred for the meantime, it is therefore only prudent to conclude this portion of the examination with some brief remarks about cognitive activity, remarks which clarify the character of the difficulty facing Descartes.

On the suggestion which I firmly reject, not merely in light of its problematic nature, but also, and more to the point, because I deem it to be unattributable to Descartes, the relation between the content of adequate and of inadequate modes of cognition is amenable to explanation without departing the orbit of the ' $R = V(o)$ ' formula. In effect, the content of an adequate mode of cognition is said to be (capable of being) reached by totalising the Vs. Were this Descartes' considered position, he could be convicted of committing the meaning-theoretic inconsistency detailed above. But while the achievement of *bona fide* scientific knowledge indeed requires that R be brought into co-incidence with o, this is accomplished, as the texts testify, not by totalising the Vs, but by eliminating the V-parameter entirely.

I mentioned at several places that the knowledge which the meditator aims for is knowledge unqualifiedly in God's possession. 'He on whom I depend possesses in Himself all the great things towards which I aspire..., and that not indefinitely or potentially alone, but really, actually and infinitely' (Meditation 3/170). We saw that

‘scientific’ cognition, as characterised in the *Rules*, ‘entirely consist[s] in the cognitive exercise of the mind’ (Rule 1/1), and thus contrasts with ‘artistic’ modes of cognition which ‘depend upon an exercise and disposition of the body’ (ibid./ibid.). In the extended sense of ‘artistic cognition’, the perceptual cogniser stands in an artistic *style* of connection with the reality about which he strives to acquire information. The representative content of his consciousness R is (partly) determined by V. Since the idea of a vantage point *vis-à-vis* an object presupposes that the subject be in some way linked to a body, that content ‘depends upon a bodily disposition’. Consider now how the proposition that ‘God is not body’ figures in the *Principles* as a premise in the argument to the conclusion that ‘God is possessed of no senses’ (1.23/228). The crucial additional remarks here is that ‘in all sensations there is passivity’ (ibid./ibid.), which implies that a sense-based mode of contact has an ineluctable element of passivity. To whatever extent the perceptual cogniser may be active, his activity is incomplete: ‘all our external senses, in so far as they are part of the body, and despite the fact that we direct them towards objects, so manifesting activity, viz. a movement in space, nevertheless properly speaking perceive in virtue of passivity alone’ (Rule 12/36). So far as these claims go, it is at least a necessary condition of the activity of divine cognition that the representative content of the divine mind be independent of any bodily disposition. This must give part of the meaning of the claim that divine cognition is ‘active’; that divine cognition does consist wholly in ‘the cognitive exercise of the mind’. (N.B. that ‘executive’ and ‘active’ are cognate.) All these claims, which are bound up with the logical syntax of terms like ‘active’ and ‘passive’, point in the direction I mentioned: divine cognition, scientific in the fullest sense, is entirely free of the influence of V. It follows that the product of any attempt to model the contents of an active cogniser’s mind by totalising the Vs would give a distant and unsatisfactory image of the object.

7. Confirming the account: a Cartesian figure

The point about the need to eliminate the V-parameter entirely as a condition of securing genuinely scientific knowledge is evidently important. Relevantly, Descartes remarks in Rule 3 on the inutility of any attempt 'to total up...testimonies' (/6) as a way of achieving certainty. But while the point's clarification could be pursued to good effect via the remark, this would lead into an examination, somewhat tangential to immediate themes, of the close relation in Descartes' texts between the evidence of the senses and the testimony of unreliable witnesses.⁶ So let me close the present phase of discussion by underscoring a thematically more convergent Cartesian thought.

In Discourse 6, Descartes comments on his own scientific enterprise presented to the world in *Le Monde*. 'I had planned to comprise

6. Evidence of the judicial metaphor's philosophical significance is contained in the apparent stutter in the meditator's early critical comment that he had previously believed his best knowledge to be gained 'either from the senses or through the senses' (Meditation 1/145). What does 'through' add to 'from'? The answer is that by 'learning through the senses' Descartes means 'learning by listening to what others say or reading their writings'. (The gloss is confirmed by *Descartes' Conversation with Burman*, translated by J. Cottingham (Oxford: Clarendon Press, 1976), p. 3.) But why does Descartes bother with the 'through' in this connection? An answer will begin to emerge if we note the slow tilt away from 'from' towards 'through', as if the latter precedes the former. Examine here Descartes' catalogue of the sources of factual information in the Letter to the Translator of the *Principles*. The list includes, second, 'the experience of the senses', third, 'the conversation of other men', and fourth, 'the reading...of...books' (/205). And in the Letter to [Silhon] of March 1648, 'sight of our eyes' and 'information passed on to you by teachers' (/230) are aligned in the way of identity. The radical suggestion here is that the flaw in the senses is not phenomenological, but is semantic, and *consists in* the fact what we have been conditioned to package our experiences in a mistaken language. For instance, we react at dawn with the words 'The sun is rising'. It is no accident, of course, that the illustration is Aristotelian. The suggestion, expanded accordingly, is that just as unreliable witnesses create the 'facts' they describe, so the inadequacy of the world-picture vouchsafed by the senses is an Aristotelian verbal artifact. It is well worth noting how Descartes balances the remark that 'the senses sometimes deceive us' (Meditation 1/145) with the observation that 'I am almost deceived by the terms of ordinary language' (Meditation 2/155).

in it all that I believed myself to know regarding the nature of material objects.... However, just as the painters who cannot represent equally well on a plane surface all the various sides of a solid body, make selection of one of the most important, which alone is set in the light, while the others are put in shadow..., so, fearing that I could not put in my Treatise all that I had in my mind, I undertook only to show very fully my conception of light' (/107). The comment may not seem to have any very philosophical content. But the fact is that Descartes evinces a good deal beyond merely literary or aesthetic affection for the figure employed. For example, after remarking that we receive information sense-perceptually 'just in the way that wax receives an impression from a seal', he cautions the reader not to think 'that all we mean to assert is an analogy between the two' (Rule 12/36). This indicates, albeit without fully explaining, why the suggestion is mistaken that an adequate grasp can be gained by totalising the contents of a number — however large — of severally inadequate grasps. Because of the nature of his medium, the painter picks out some one feature of an object for frontal display, to the exclusion of others which are therefore 'put in shadow'. A second painter, or the same painter on another occasion, can 'approach' the object from a different angle. But one thing the painter cannot do. Since his medium lacks one dimension possessed by the object, he cannot duplicate the three-dimensionality of the latter either in a single painting or in however many he may devote to it. By transferring to a different medium, e.g. clay, the painter could achieve a representation which 'adequately' matches his objects's dimensionality. But should he turn in his palette for a potter's wheel, he would cease to be a painter.

Roughly the same holds true, according to Descartes, of the sense-perceptual cogniser. While it may be correct, and is *a fortiori* intelligible, to say that a group of perceiving subjects who pool their data possesses a more accurate representation of an object than any single one among them, the result of this kind of 'totalisation', since it remains within the parameters of sense-perceptual cognition, can only *approximate* to the fully adequate representation which Descartes takes science to achieve.

While indicating roughly why the totalisation suggestion will not do, this again illustrates how problematic Descartes' account is of the relations between 'unclear and indistinct' experience of the world and scientifically adequate cognition. The scientist or adequate cogniser — to proceed in the picturesque terms of the preceding paragraphs — corresponds to the sculptor; the inadequate cogniser, to the painter. But a piece of sculpture, representative of some object, far from being a better painting thereof than any painting the painter might produce, is of course a representation of a wholly different kind. So one who speaks of 'replacing' the one by the other is speaking of doing more than making explicit what is already implicit in that which he takes to need replacing.

The problem for Descartes should be recast independently of the artistic figure. Cognising scientifically, though it is something the sense-employing cogniser does not do, cannot correctly be described as something he fails at *qua sense-perceiver*. So while it may be true that 'certainty' is unachievable in any case of 'probable opinion', its unachievability does not *ipso facto* constitute a flaw in the condition of the probable cogniser which, by self-examination, he will recognise, if he is rational, to oblige him to proceed beyond the condition which happens to be his own.

In the sequel, the following explicitly ontological formulation of Descartes' distinction between probability and certainty will be worked out and defended: the objects of certain knowledge are different objects than the objects of probable knowledge. The critical question posed here will then assume a form which is less anachronistic, and we will thus be enabled to frame an answer more harmonious with the texts. Here we are asking what it is in Descartes' eyes that obliges the probable conception of things to be surpassed. Under the influence of the ontological formulation, the question will transmute into this: why must a conception of the world as comprising objects which are (in a sense to be explained) probable be disciplined by a conception of the world as comprising objects which are (in a sense to be explained) certain? The answer to our question in its present form is that a probable conception of things is non-realist; the propositional components of the conception lack definite truth values. The

answer to the successor question will be that probable objects are not objects in their own right; they are not fully real.⁷ But while a grasp of the details of the answer to the latter will do a great deal to clarify why Descartes believes the probable conception of things to be defective — to be abhorrent to reason — we will find that the belief is recalcitrant to analytic defense, and that the best defense available for it can ultimately be resisted.

7. In one form or another, such a claim is familiar from all the classical rationalist texts. Thus, Spinoza asserts that only substances exist in and are conceived through themselves, intending thereby to place a stigma on the (material) particulars we normally regard as ontologically basic, and Leibniz contends that because the components of the material realm are endlessly divisible, that realm is 'phenomenal', not self-subsistent.

III Rationality and Mind

The preceding results are brought to bear on Cartesian dualism. Cartesian dualism is relative to the Principle of Doubt: the spirituality of the subject is according to Descartes a direct function of, and is argued for by reference to, the subject's ability to achieve 'adequate', sense-transcending, knowledge. In other words, the duality of the subject is the head of a coin whose tail is adequate or 'certain' knowledge of the world. It is shown that this correlativity between the character of the knower and the character of the known is routed through the divine case. God is the 'knower' *par excellence*; for that very reason, he is unqualifiedly spiritual. The ontological similarities and differences between man and God are examined. While the similarities Descartes states confirm the correlativity thesis, the differences begin to suggest the real difficulties which hamper the success of the overall Cartesian project. It is also demonstrated that Descartes misstates his position, and hence that the standard interpretation of the significance of the *cogito*, since it takes its cue from the misstatement, is open to serious objections, and must therefore be revised.

1. *Between falsehood and truth: a via media*

All sense-based beliefs are uncertain if any are. This Cartesian argument is valid. Moreover, to the extent that Descartes' structural analysis of a sense-perceptual mode of contact with reality is accurate, the negative conclusion drawn deserves to be favourably assessed. While this saves Descartes from the kinds of objections usually pressed against the project of doubt in Meditation 1 — it shows that the content of his negative critique of the senses remains worthy of an analyst's attention — he is obviously not out of the woods yet. In light of our improved understanding of the purport of 'probable' and 'certain' in the Cartesian system, it appears that the subject may agree that his normal beliefs are uncertain — indeed, if Descartes' argument is valid and its premises true he must agree — without thereby incurring a rational obligation to work for their replacement by something else. If the uncertainty of a belief entailed its (simple) falsehood,

then the rational agent would, practical considerations apart, be duty-bound to discard an uncertain belief. But since 'uncertain' entails not 'false' but 'untrue', i.e. since an uncertain proposition is a proposition of a kind which cannot definitely be evaluated as true, the situation is quite different. We may concur that a subject, qua rational, cannot abide falsehood. That does not however prevent him, compatibly with bowing to the imperatives of his rationality, from tolerating probability. Accordingly, the use to which Descartes puts PD, his principle of rational acceptance, imports a substantive assumption, viz. that the rational subject cannot rest content with anything other than truth in a realist sense. The assumption is substantive for Descartes because, we now see, a *via media* cuts between the rejection of falsehoods and the acceptance of truths: the acceptance of probabilities. The conception of rationality exhibited in PD is relativised to a notion of truth standing opposed not to falsehood (this would be unproblematic), but also (this being problematic) to probability.

What direction would Descartes' thought have taken had he recognised that his analysis of sense-perceptual cognition, even if unimpeachable qua analysis, does not have the implications he saw in it? Our understanding of the history of the early modern period continues to be compromised by a failure on the part of those interpreters who set the tone to treat the question; and to the extent that we are part of the same historical tradition, our self-understanding suffers too. The philosopher who supersedes the Cartesian position, Kant, moves in precisely the direction alluded to. In any event, given the gap between the negative thrust of the *Meditations* (which thrust, I will show below, has exercised an unrecognised historical influence) and its positive teachings, it is evident that in order properly to grapple with any element of Cartesian philosophy the interpreter has to ask whether or not, and if so in what measure, that element is indebted to the substantive assumptions which vault Descartes beyond criticism of mundane world-representation to high-grade 'science'. The kind of defense supplied above of Cartesian doubt requires, as a condition of its possibility, that the doubt be dissociable from the assumptions. Obviously, the attempt to make something of a Cartesian thesis while ignoring its links with these assumptions,

when such links exist, will produce misrepresentation of Descartes' meaning. A case in point here is the jewel of Cartesianism, mind-body dualism. Whereas Descartes' criticism of the senses is amenable to analytic revitalisation because it is largely independent of positive Cartesian views (though it is doubtless motivated by Descartes' perception of his *terminus ad quem*; he otherwise would have had no excuse for formulating it as criticism), the same cannot be said of dualism. The various reconstructions of dualism essayed in recent years, e.g. in the increasingly sophisticated terms of modal logic or in the reflected light of developments in psycholinguistics and the human sciences, are predicated on a failure to see how profoundly this element of Cartesianism is beholden to the substantive assumptions latent in Descartes' reasoning. What is retailed as the 'real content' of the original article in the recent literature bears the label only.

I may appear here to have switched horses in midstride. It is no accident, however, that I link the issue of the substantive conception of rationality informing PD (i.e. PD in its critical as opposed to its analytic use — the use which imports analytically controversial assumptions) with the issue of Cartesian mind-body dualism. To gain a proper understanding of Descartes' position on mind, direct reference has to be made to his special conception of rationality. When Descartes states that 'in order to understand the facts of metaphysics, the mind must be abstracted from the senses' (*Replies* 2/32), he is not merely asserting that a subject's agreement to guide his doxastic decisions by PD commits him to the truth, and hence commits him to dualism, since the latter is established by various arguments to be true; the point is that man's dual nature (or, more exactly, his essential mentality) is internally bound up with his subjection to the condition of rational belief acceptance. Cognitive activity in accordance with the principle is not, in other words, a mere background precondition for the establishment of essential mentality: such activity is the direct expression, the pre-eminent exemplification, of essential mentality. Another way of putting this would be by saying that the rational doxastic policy of a cognising subject affiliated with a body in a fashion incompatible with the truth of dualism could not be

encapsulated by PD in its critical use. As I explained, rational acceptance, for Descartes, is relative to truth of a radical realist kind. No doubt, it sounds odd to say that the subject whose knowledge consists in truths of this kind — ‘certainties’ — could not be non-dual. But one should not underestimate the implications of the qualification ‘radical’. In any event, none of these formulations is sufficiently precise to permit reasoned assessment. My aim in this chapter is to achieve, as best I can, precision on the matter; to explain, as best I can, the underlying character of Descartes’ dualism by exposing the doctrine’s internal linkage with his conception of rationality. ‘As best I can’. I do not say that the doctrine is defensible, let alone coherent. So the achievement of precision is in the first instance to be viewed as an exegetical task.

2. *What am I? The structure of Meditation 2*

One who accepts the standard reading of Meditation 1 and agrees that PD is worked out by SA is apt to find the argument in Meditation 2 capacious to the point of amorphousness. The appearance that Descartes has tossed a handful of irrelevancies into this Meditation is however overcome once it is recognised, *pace* the standard reading, that Descartes has equipped himself due to the labours of the first Meditation with a firm *result*: sense-based beliefs are ‘uncertain’ in a truth-involving way. For the structure of Meditation 2 is a function of the result. By examining the dialectic of this Meditation it is therefore possible to glimpse the connection between rational belief or knowledge on the one hand and dualism on the other.

Although the *cogito* establishes the meditator’s existence in a doubt-resistant way — as a ‘certainty’ — his nature remains underdetermined: ‘I do not yet know clearly enough what I am, I who am certain that I am’ (Meditation 2/150). The sense in which it could be agreed that I am a thinking thing (*sum res cogitans*) from the (certain) knowledge that I think (*cogito*) is not appreciably different from the sense in which it follows that a table is a coloured thing

from the knowledge that it has a colour. This sense is much too weak for Descartes' purposes. That I am in this sense a thinking thing is compatible with my not being essentially a thinking thing. Can Descartes do any better without begging the question? In the course of trying to respond to 'What is a thing which thinks?' (ibid./153) he suggests that part of an answer might be given by 'a thing ... which...imagines and feels' (ibid./ibid.). So far as the *cogito's* establishment of existence goes, it may be that I, the meditator, 'am the same who feels, that is to say, who perceives certain things, as by the organs of sense'(ibid./ibid.). However, the suggestion is not advanced seriously, for the following reason: 'it is very certain that the knowledge of my existence taken in its precise significance does not depend on things whose existence is not yet known to me' (ibid./152).

But while we are aware that it is a necessary condition for the truth of dualism that the subject's nature be connected only inessentially with corporeality, and hence aware that it is imperative for Descartes that the subject of the *cogito* be in the first instance distinguishable, and in the end distinguished, from the subject of sense-experience, imagination, and feeling, this reason, as normally construed, would have to be dismissed as grossly question-begging. That I am certain that I exist, though uncertain that I have a body (and hence uncertain that I am genuinely perceiving), does not establish that I am not a body. Otherwise, by parity of reasoning, if I am certain that I am pounding away on a typewriter, but uncertain that the typewriter has 44 keys of print, it would follow that the machine does not have 44 keys of print. While if Descartes reasons thus he would have no defensible right to rule out the possibility that he is 'the same who feels', we are now well-placed to challenge the construal.

The crucial fact, not to be lost sight of for a minute, is that it has been *established* in Meditation 1 that sense-experience, even when 'veridical', does not supply certain knowledge. If the assumption is made that the nature of the (cognising) subject is correlative with the kind of knowledge he possesses — that the subject's conception of himself is one side of a coin whose other side is his conception of the

world — then Descartes can be exonerated of flirting with the preceding fallacy. He would not then be arguing fallaciously from the truth-neutral uncertainty that he is perceiving to the substantial conclusion that his nature is not that of a perceiver. Indeed, he could not argue in any such way, since one's knowledge is comprised by propositions to which truth values have been assigned, and an uncertainty of this kind awaits truth-evaluation. The argument would take him, rather, from the established premise that sense-perceptual beliefs are untrue to the conclusion that, qua knower of the truth — for the *cogito* is deemed to supply a truth — he does not have the nature of a sense-perceiver.

A more careful formulation is called for here. Meditation 1 establishes that the probable conception of things — nearly enough, the sense-based, pre-meditative conception — does not intersect with the true: the union set of certainties and probabilities is necessarily null. But if the propositions expressing the content of a sense-based conception of reality, including among them propositions bearing on the meditator's initial conception of his own nature as a sense-perceiver, are intrinsically probable, isn't the reflective meditator within his rights in refusing to appeal to probabilities in attempting to determine what his (true) nature might be (assuming, of course, that he has such a nature)? A sense-based mode of contact with reality differs in principle from that mode (whatever it is: we know, on the level of words, that it is 'active', 'intuitive', etc.) capable of delivering certainties. So can't a legitimate distinction be made between the nature of the subject qua cognising in the one, and in the other, mode? For if the sense-based conception is not a conception of things as they 'really' are, and if the meditator is 'really' of such-and-such a nature, then his nature will in principle be excluded from the content of the former.

Why does Descartes regard himself as justified in the first place, despite having admitted that he does not yet know what he 'really' is, in not seriously addressing the suggestion that he, whose existence is established as a certainty by the *cogito*, may be 'a thing which imagines and feels'? It would have been grossly invalid for Descartes to discard the suggestion on the grounds that it is uncertain, truth-

neutrally uncertain, that the mediator 'imagines and feels' — because, say, he may be dreaming. But were Descartes relying on the negative result of Meditation 1, that the sense-given conception of things is uncertain, truth-involvingly uncertain, this invalidity would be avoided. And on the assumption that, for Descartes, the nature of a knowing subject is internally linked to the character of the known, the argument would stand a chance of going through to the end.

To be sure, stating that scientific rationality and Cartesian dualism go hand in hand is one thing; proving the affinity, another. With the aid of a result we have already reached, one further step can however be taken to show that the idea of correlativity does make quite good sense in the Cartesian context. Recurring to the ' $R = V(o)$ ' schema, it is possible to discern that the nature of a probable knower would have to be assessed as different from that of a possessor of certain knowledge. For if the o -representative content of the subject's state, R , is determined by a point of view, V , then the subject, by his very nature, will have to stand in some selective relation to the object. But this, in Cartesian terms, bears witness to the subject's embodiment. Where a subject's R is determined by V , it follows that, qua representer, he cannot be described as unconnected with a body. Qua cognising in a mode which supplies evidence for claims which are at best probable, the probable knower could not in other words be evaluated as dual in Descartes' official sense.

3. Knower and known: the wax-experiment

Even if a Cartesian link can be verified between the character of the knower and the character of the known, it might still be objected that Descartes' argumentation in Meditation 2 cannot plausibly be interpreted by its means. In the passages we have been considering, Descartes speaks of existence, not of knowledge. He asserts that the meditator's 'knowledge of [his] existence' does not depend on those things 'whose existence is not yet known'. If he did have the link in mind, should he not rather have said that because he knows for certain that he exists, and hence is a subject of certain knowledge, his

nature is not to be confused with the nature of a subject whose beliefs are at best probable? Shouldn't he have expressed himself in such a way as not to suggest the flaw in probable knowledge to be that objects probably cognised are not known to exist?

For one quite obvious reason, it is not at all surprising that the textual state of play here is, to say the least, unstable. The *cogito* fulfills two functions; first, it serves to establish the meditator's existence as a certainty; second, it provides a springboard towards the determination of the meditator's nature. But it is clear for an equally obvious reason that Descartes should not confound these functions. If he did, it would begin to seem that the meditator's essence consists in his existence — something held by Descartes to be exclusively true of God. In any event, by carefully examining how the argument unfolds in Meditation 2, we can see in a non-conjectural way that the objection we are considering is misconceived.

At this stage Descartes performs the thought-experiment with the piece of wax. Were the objections cogent — were Descartes really concerned here with existence in the way the objector believes — there would be no contrast at all in the offing, and hence the experiment could not have any power to yield an advance. Descartes' meditator has not at this stage established the existence of the material world, *a fortiori* not of 'this piece of wax' (/154). So he could scarcely progress towards a clearer comprehension of his nature by distinguishing the conception of the wax gained by the understanding from the conception vouchsafed by the instrumentality of 'the senses' (/153).

Pace the objector, it seems that the issue of existence is not in question here. Admittedly, Descartes does state his point early in Meditation 2 by reference to existence. But other texts can be mustered which show this to be a blunder. Having proved in Meditation 5 that God exists, Descartes observes that 'I have the means of acquiring a perfect knowledge of an infinitude of things, not only of those which relate to God Himself and other intellectual matters, but also of those which pertain to corporeal nature in so far as it is the object of pure mathematics [which have no concern with whether it exists or not]'(/185). An unremoved residue of

provisionality characterises the wax-experiment, connected with the as yet unresolved issue whether the move can legitimately be made from 'clear and distinct' to 'true'; whether, in Descartes' own words, 'things are in their true nature exactly as we perceive them to be' (*Replies* 4/101). But this presupposes that the 'clear and distinct' can be filtered from the 'obscure and indistinct' quite apart from an actual decision on the move's legitimacy. So the reality of the doubt about the move in Meditation 2 notwithstanding, the thought-experiment can successfully be utilised, according to Descartes, for the purpose of making a genuine distinction. He himself states little less in responding to just the objection we are considering: 'you here incidentally urge [Descartes answers Gassendi, the author of *Objections* 5] that, *while not admitting the existence in myself of anything save mind, I none the less speak of the wax that I see and touch* But you ought to have noticed that I...deal...solely with the thought of seeing and touching' (*Replies* 5/213). The point should virtually be clinched once it is recognised that the continued existence of a problem as to whether clarity and distinctness are sufficient marks of truth is not seen by Descartes as leaving open the possibility that the unclear and indistinct *might be true*. Equipped with the negative result of Meditation 1, Descartes does not need to worry himself on this count. The argumentation of the first Meditation establishes that since standard factual propositions, which have a non-realist semantics, are always, in principle, asserted on the basis of less than complete evidence, no assertion of any such proposition can be assigned the truth value true. So the non-intersection of probability and truth is a simple analytic matter. And from this it follows that the thought-experiment is capable of yielding a substantive outcome quite apart from any consideration of existence.

Testimony enough has already been assembled to warrant concluding that the wax-experiment is, for Descartes, existentially neutral. But an important difficulty remains about how the case is made. Examine this claim: 'it will be said [Descartes writes] that these phenomena [of sense] are false and that I am dreaming. Let it be so; still it is at least quite certain that it seems to me that I see light, that I hear noise and that I feel heat. That cannot be false; properly speaking

it is what is in me called feeling; and used in this precise sense that is no other thing than thinking' (Meditation 2/153). Note, once again, that Descartes explicitly argues that the issue of existence does not arise. Providing the meditator restricts himself to claims about (what I shall call) *seemings* — about what he seems to see, seems to hear, etc. — he is not assuming, nor committing himself to, the existence of corporeal objects. But if these seemings are themselves existentially uncommitting, why does Descartes see fit to go to the lengths to which the wax-experiment takes him? Why doesn't he go *directly* from the 'certainty' of existentially neutral seemings to the nature of his mind? That Descartes moves beyond seemings suggests that there is a distinction to be made even in the existentially neutral realm. With the negative result of Meditation 1 in hand, we are in a position to see what distinction this is.

The structure of existentially neutral seemings, as propositionally expressed, *embeds the sense-perceptual nexus* — the very nexus which has been subjected to searching criticism in Meditation 1. When I describe how things seem to me, I do not merely say that I think of a light, that I think of a sound. What I say is, rather, that I seem *to see* a light; seem *to hear* a sound. So while a restriction to the level of seemings evacuates our claims of existential content — it can be true that I seem to see a light or to hear a sound even if there is no light to be seen or sound to be heard — the representative content of consciousness is framed in terms of the sense-based conception of things. Accordingly, what is accomplished through the wax-experiment is a demonstration that the structure of consciousness, so far as (genuine) knowledge goes, differs in character from the structure of consciousness exemplified by a sense-based mode of contact with the world. The end result is that 'I could not even understand through the imagination [sc. the cognitive instrumentality of seemings] what this piece of wax is [;]...it is my mind alone which perceives it' (ibid./155). Descartes in fact elevates the last point to the status of a 'postulate' in codifying his reasoning in *Arguments Drawn up in Geometrical Fashion*. For purposes of studying one's own mind, it is essential to suppose that 'whatever [is] derived from the...senses is false' (/54). And the point is made even

more forcefully in *Replies* 5, where Descartes explicitly links the operation of the imagination with the 'corporeality' of the ideas which the mind, qua aided by the imagination, considers: 'though geometrical figures are wholly corporeal, nevertheless the ideas by which they are understood, when they do not fall under the imagination, are not on that account to be reckoned corporeal' (/229).

Descartes can therefore be acquitted of arguing fallaciously to the conclusion that he is essentially non-corporeal from the certainty that he exists coupled with the uncertainty of the existence of his body. The meditator does not hold that he is distinct from his body because its existence is 'not yet known' to him. So to represent him as arguing is to ignore the fact that the kind of knowledge of body of which he speaks isn't knowledge *stricto sensu*. Assuming that bodies exist, the meditator 'could not even understand' their nature 'through the imagination'. Even if the existence of bodies is premised, the kind of knowledge the meditator would have of them via the senses would fall under the head of uncertainty. In Descartes' own harsh word, knowledge of such a kind would have to be assessed as 'false'; in my more revealing word, it wouldn't count as more than 'probable'. We must conclude that Descartes is therefore relying here on the negative critique of Meditation 1. Specifically, he is relying on the result that body could not really be 'known' in a sense-based fashion. The wax-experiment establishes, or at least points towards, the way in which a body really 'can be known'(/156).

So there is a lapse here in Descartes' own understanding. As a condition of advancing the case, it is insufficient that the wax-experiment effectively be evacuated of existential assumptions about the material world, since seemings are amenable to existentially neutral construal as well. Descartes is also therefore obliged to use the wax-experiment to block an appeal to seemings in the frame of a specification of certainty. The exchange with Gassendi forces Descartes to clarify his thinking about this. Further, and perhaps better, confirmation accrues by examining the response to Hobbes' remark that '*reasoning will depend on names, names on the imagination, and imagination, perchance, as I think, on the motion of*

the corporeal organs' (*Objections* 3/65). Descartes, we have already seen, denies that our ideas of corporeal objects 'are...to be reckoned corporeal' providing 'they do not fall under the imagination' (*Replies* 5/229). He repeats the point here by emphasising 'the difference between imagination and pure mental conception, as when in my illustration I enumerated the features in wax that were given by the imagination and those solely due to a conception of the mind' (*Replies* 3/66).¹ He *agrees*, in other words, that should the wax-experiment have failed to distinguish existentially neutral seemings, which are nevertheless bound up with an imaginative instrumentality, from the 'pure' intensional structures of thought, it could not have fulfilled its purpose.

This construal is usefully supported by an apparently question-begging comment Descartes makes upon the experiment. With reference to the entrenched, psychologically unavoidable, sense-based conception of the piece of wax, Descartes asks rhetorically: 'What was there which might not as well have been perceived by any of the animals?' (*Meditation* 2/156) — the anticipated answer being 'Nothing'. Animals, for Descartes, are soul-less: they are not ontologically dual. So if a sense-based conception were to qualify as 'knowledge', man's dual nature could not be established. The implication is explicitly noted by Gassendi: '*that sensation which exists in the brutes, since it is not dissimilar to your sensation, [is] capable of earning the title of thought also*' (*Objections* 5/144). We do not have to attribute to Descartes the categorical contention that animals lack souls in order to formulate the supportive point. What he writes can be phrased conditionally: if a being's mode of contact with reality involves the intensional structures of sense, feeling, and imagination,

1. Note with especial care how Descartes *concurs* with Hobbes that were 'names' essential to his reasoning, the result he claims would be endangered. I will take up this revealing admission, which is relevant to assessing the relations between language and mind in the Cartesian system, below. A similar connection between words and 'corporeal imagination' is made by Spinoza: 'words are a part of the imagination — that is,...we form many conceptions in accordance with confused arrangements of words in the memory, dependent on particular bodily conditions' (*On the Improvement of the Understanding*/33).

it would have to be essentially embodied. Conversely, it is because (human) thinking involves a different set of world-directed intensional structures that the thinker is distinct from his body.²

The key to the interpretation is the idea of correlativity between the character of the knower — he whose beliefs qualify as certain — and the character of the known. The implied reading doesn't square with everything Descartes says. In particular, it clashes with the manner in which he seems to extract conclusions about mind in Meditation 2 solely from a consideration of the condition of the meditator who has reached the stage of the *cogito*. On the standard understanding of the texts, a stress on self-contained subjectivity is a basic feature of Cartesianism; and the idea of hermetic subjectivity is antithetical to that of a correlation between the character of the subject and the character of his objects. In the concluding sections of the chapter I will show that to the extent that the *cogito* presupposes a Cartesian commitment to self-contained subjectivity, this is due to an equivocation in Descartes' notion of certainty, an equivocation whose proper elimination banishes the presupposition. A few steps have already been taken to make out that the complexity of the argument in Meditation 2 is excessive from the viewpoint of the standard understanding, and that Descartes' presentation of the wax-experiment, possibly because of his anxiousness to secure existential neutrality, smudges a distinction which is vitally important to him. Assuming that these results serve to hold the objector to correlativity temporarily at bay, I propose now to work out the idea by reference to the wider Cartesian position; specifically by revealing its decisive role in Descartes' dualist thinking. This will place us advantageously to deal in a more secure way with the problems outstanding.

2. The case of Leibniz is enlightening here. In opposition to Descartes, Leibniz appears to treat the intensional structures of (existentially neutral) seemings as a basis for reaching conclusions about the nature of mind. So it is as it should be that Leibniz's view of mind is different from Descartes'. The latter's sharp distinction between men and (sub-human) animals vanishes.

4. *God and the soul: an essential connection*

In the last chapter the divine associations of Descartes' conception of the meditative project were commented on at length. Qua seeker after genuine knowledge, the meditator imitates, in an intellectual medium, the (literal) activity of the divine subject. A connection was thus established between Descartes' view of certain knowledge of the world, on the one hand, and, on the other hand, the divine cognitive situation *vis-à-vis* the reality which the Cartesian scientist seeks to penetrate. If the hypothesis of an internal link between rationality and dualism is credited, two expectations about the texts are therefore created: first, that the issues of divine nature and of man's character will be treated together; second, that divine spirituality will be connected directly with divine knowledge.

Preliminarily to show that the first expectation isn't disappointed, it should suffice to quote a representative sampling of texts. Time and again in the Cartesian *corpus* we encounter the anticipated conjunction. 'God and ... the human soul' (Discourse Preface/81); 'the knowledge of God and of the soul' (Discourse 4/105); 'the existence of God and of soul' (Discourse 5/106); 'God and the soul' (ibid./107); 'there is a God, and ... the human soul is distinct from the body' (*Meditations* Dedication/134); 'the existence of God and the real and true distinction between the human soul and the body' (ibid./137); 'God and the human soul' (*Meditations* Preface/139); 'the knowledge of our mind and God' (*Meditations* Synopsis/143); 'God and my own nature or mind' (Meditation 5/179); 'God and the soul' (*Replies* 2/31); 'an idea ... of God or of myself' (*Replies* 5/223); 'the Deity, the rational soul' (*The Search After Truth*/310); 'God and our soul' (ibid./313). And so on. The frequency of the twinning confirms that the two notions are interlinked in content; that their close association isn't due merely to the doctrinally neutral fact that both issues happen to be central in Cartesian metaphysics.

The second link is also served up by the texts. As the relevant passages will be assembled for detailed inspection below, I content myself here with a solitary citation. At *Principles* 1.23 we find Descartes arguing to the conclusion the 'God is not body' on the

grounds that 'divisibility is included in local extension, and divisibility indicates imperfection' (/228). Since God is perfect, he cannot therefore be locally extended. Descartes now proceeds to say: 'because in all sensations there is passivity ..., we conclude that God is possessed of no senses' (/ibid.) Reverse the reasoning and the moral jumps into relief. A being whose mode of knowledge is sense-based is fundamentally 'passive', as opposed to 'active'. Since God is cognitively active in the fullest sense — since he possesses certain knowledge — he must therefore be spiritual in nature.

Restated succinctly, the thesis comes to this. The special status accorded man in Cartesian philosophy is a function of the view that man, by contrast with animals, is *a knower, a scientist*. To be sure, many would agree that man is unique among his co-terrestrials in the capacity for knowledge without seeing themselves as committed thereby to dualism in the philosophy of mind. But Descartes' conception of knowledge — a conception identified in a negative way by the critique of the senses in Meditation 1, and illustrated more positively by the notion of rationality codified in PD — is a special one. In light of the link between divine knowledge and divine spirituality, we can see how very special indeed. Evidently, rationality is fully exemplified in the divine case. So man's status as a knower is in effect a sign of his divine affinity. Thus Descartes writes early on that 'the human mind has in it something that we may call divine' (Rule 4/10), and later he speaks of 'something comparable in myself [to God]' (*Replies* 5/222). In both instances he has man's capacity for achieving knowledge — genuine or certain knowledge — in view. If so, the constant twinning of the issues of man's dual nature and of divine spirituality is not merely optional. Why is it obligatory? Why, in other words, cannot Descartes' argumentation for the conclusion that man is dual formally duplicate, without substantively depending upon, his argumentation in the divine case? The answer is that the rationality of the scientist is exemplified only *partially* in the human case. While man is for Descartes a knower, a scientist, there is a sense in which, even when all is said and done, this is so at most *in potentia*. Without reliance on the argumentation about God Descartes could not therefore establish what he requires about man.

To confirm the internal link between the issues of man's nature and of God's, and to confirm that the notion of rationality is understood primarily by reference to God, it suffices to consider Descartes' quite explicit claim in *Replies* 2 that 'the idea we have, e.g. of the Divine intellect, does not differ from that we have of our own' (/36). Descartes isn't asserting that the two ideas are indistinguishable. He means that the idea of God's nature is not *generically* distinguishable from the idea of man's; 'except merely as the idea of an infinite number differs from that of a number of the second or third power' (/ibid.). So there is some difference. Human spirituality involves indefinitenesses which are eliminated and potentialities which receive full actualisation only in the divine case: 'in [God] all the treasures of science and wisdom are contained' (Meditation 4/172), 'and that not indefinitely or potentially alone, but really, actually and infinitely' (Meditation 3/170). We already saw how 'certainty' is linked by Descartes with 'immutability' (*Replies* 2/41, *Replies* 6/245) — the foreclosing on all genuine counterfactual possibilities of gaining direct evidence. Precisely as this leads us to expect, God is characterised as 'immutable' (Meditation 3/162, 165).

The (residual?) potentiality in the human case will prove a source of immense difficulty for Descartes' view that genuine knowledge is humanly attainable. And in a fashion supportive of my large thesis it will thereby prove an equal stumbling block in the way of establishing Cartesian dualism. Be this as it may, if the link between man's spirituality and scientific rationality is now credited, a further expectation is created. Because God alone exemplifies scientific rationality to the full, we expect that Descartes will ground scientific knowledge in God. And so he does. It would be absurd to say that this has passed unremarked by the bulk of commentators. But it is quite true that the nature of the 'grounding' is not generally understood. The oft-stated Cartesian claim that my knowledge of the world depends on God is typically construed by reference to divine veracity: God will not deceive me in respect of what I grasp 'clearly and distinctly'. Undeniably, there is that facet to the link. But the claim is a far more substantive one, as we have already glimpsed at several places, e.g. in Descartes' assertion quoted from Discourse 5

that he achieves his 'scientific' results because, by contrast with those he criticises, he does not rest his 'reasons on any other principle than the infinite perfections of God' (/108). True enough, if God is veracious, I can reliably guide myself by the light of the 'clear and distinct'. But it is a far cry from this to claiming that my scientific reasoning is rested *only* on divine veracity. God, in other words, serves for Descartes a function much more exalted than entrepreneur of truth. In some sense, he is also *responsible* for it.

A preliminary indication of the stronger link here is vouchsafed by noting the following verbal overlap. Descartes' condition of rational acceptance codified in PD is that of being 'entirely certain' (Meditation 1/145). Rational credence can be attached only to a proposition which is entirely certain. Now this notion of 'entirety' also appears in a different context; an ontological rather than knowledge-theoretic one. In *Replies 2* Descartes writes: 'this entire world also could be called an entity formed by the divine thought, i.e. an entity created by a simple act of the divine mind' (/34). And so does the notion of truth appear ontologically, e.g. in Descartes' characterisation of God as 'the true cause' (*Principles* 1.24/229).

5. Modernising dualism by changing the subject

Before moving to the precise link between scientific rationality and dualism, a move which will transport us into the misty recesses of Cartesian ontology, it is worth pausing to underline a feature of Descartes' position to which insufficient attention is normally paid. Let me do so in a forward-looking way by calling upon a direction of discussion of that position which has become quite influential in recent years.

Dissatisfied with the barely comprehensible theological elements and dubious ontological reasoning of Descartes' explicit presentation, latter-day philosophers attempt to set Cartesian dualism on a more attractive footing. The attempt of present interest is N. Chomsky's.

It isn't my immediate purpose to evaluate Chomsky's thesis; only to show that Chomsky is insensitive to a feature of Descartes' original

position which is, I believe, of paramount importance to its *Cartesian* character. As a cursory reading of *Cartesian Linguistics* confirms, Chomsky assumes that when a Cartesian philosopher of mind — one who supports dualism of Cartesian type — singles out linguistic activity as special to humans, he is *ipso facto* giving voice to the thought that men have a special kind of rationality; so very special, in the event, that an ontological rift between humans and (sub-human) animals might be deemed, by a philosopher like himself who operates in these terms, to follow.

In the contemporary context of discussion, it is wholly natural to make the assumption. Even if Cartesian dualism ultimately resists resurrection along these lines, the continued relevance of Descartes' thinking requires at the very minimum that the *motivation* for dualism be one with which we are able to conceive an unproblematic (even if superficial) sympathy. But natural though the assumption be, it doesn't follow that it is legitimate. This direction of discussion begins, to put it figuratively, *from below*: from the 'positive' level — the level comprised by facts which are common ground among contemporary thinkers. These will of course be facts about the world as naturally conceived. In effect, some distinction between men and animals is sought which can be deemed sufficiently strong to warrant what we ourselves regard as scientifically respectable speculation or theorising about underlying differences.

Positive differences between men and animals are legion. Men walk upright. Their opposable thumbs enable them to manipulate the physical environment in ways much more complex than (other) animals. Men are social beings whose communal behaviour, unlike that of ants and bees, is highly plastic or adaptive. Beginning from the positive level, one might therefore speculate in a dualist direction on the basis of such uncontroversial and human-individuating truths as 'Men live in changing societies', 'Men are tool-makers and users', 'Men play games', and so on.

That dualist speculation must have a motive scarcely deserves remark. One does not spring awake one fine day to the truth of dualism, or excogitate it apart from any prior deliberation about the life-world. But it does not have to be the case that the operative

motive is an entirely positive one. Rather than beginning from below, the dualist may well set out *from above*. A doctrine, surfacing occasionally in Descartes' texts, attests that his point of departure is of such a kind, viz. the doctrine, mentioned by Chomsky, of the 'great chain of being'.³ Thus Descartes speaks of possessing an idea which 'represents a God,...others representing corporeal and inanimate things, others angels, others animals, and others again which represent to me men similar to myself' (Meditation 3/164), and he refers to a hierarchy of intelligent natures 'more perfect than a human being' (*Replies* 5/218). Chomsky, as behooves a 'scientific' champion of dualism, does not believe that this standard piece of seventeenth century intellectual luggage exercises any very profound influence on Cartesian philosophy. But uncritically to ignore its possible influence in the frame of a consciously exegetical project is to allow one's own domestic assumptions to eclipse the obligations of interpretative impartiality.

Thanks to the labours of the preceding chapter, no room for doubt remains that Descartes' discussion of human intellectual activity is conducted very much under the shadow of a divine cognition-theoretic ideal. Meditation 4 gives the point a nice epigrammatic formulation, in the thoroughly non-positive assertion that man is 'in a sense something intermediate between God and nought' (/172). Time and again, Descartes struggles to show that despite man's intermediacy, he is not incapable of measuring up to the divine ideal. So unless it is expressly confirmed that these facts have no real doctrinal influence, it is therefore incumbent of anyone seriously interested in expounding capital 'c' *Cartesian* views of human nature to keep firmly in mind that mundane human cognitive activity is in Descartes' view defective, that it is less than it might be.

It does not take prophetic powers to anticipate that a latter-day investigator who listens to the historical literature for early echoes of his own scientific views will likely soft-pedal this strain in Descartes' writings. Chomsky, for whom Cartesian speculations about man's cognitive deficiencies from a divine standpoint are at best of

3. *Cartesian Linguistics* (New York and London: Harper & Row, 1966), p. 13.

antiquarian note, hears Descartes' appeal to the chain of being doctrine as bearing primarily on the *natural* distinction between men and animals, i.e. as giving a usefully dramatic form to the thesis, based on the positive facts, that man is qualitatively superior to animals. But with specific reference to Chomsky's link between human linguistic activity and dualism, we can raise a more articulate doubt about the accuracy of this construal of the texts. For the mentioned doctrine gives at least equal expression to Descartes' belief in a qualitative difference between man and God. Accordingly, in attempting to gauge the relevance to Cartesian dualism of some positive difference between men and animals, it must be asked whether, in respect of the difference, men align with God. As far as Chomsky is concerned, the question's importance is easily appreciated. There are, again, many and varied differences between men and animals; differences in morphology, behavioural differences, and so on. The bulk of these has no bearing on Descartes' dualist thesis. Descartes himself remarks: 'Within a single species some...are more perfect than others' (Letter to More of 5 February 1649/244). That men alone among animals are language-users would therefore be relevant to Cartesian dualism only if it reflected some feature of man's affinity with God. So while Chomsky may have hit upon a dualistically significant difference, turning the 'may have' into a 'has' requires doing more than Chomsky does.

I shall eventually address the question of the link between human linguistic ability and dualism directly. But though the preceding remarks have been framed by reference to Chomsky's reading of the link, much the same point can be made even at this stage without exiting the Cartesian frame proper. In *Objections* 5 Gassendi expresses just the kind of opposition which, if I am right, forces Descartes' real motivation out into the open. Gassendi agrees that there are differences, striking ones at that, between men and animals. But he insists that while these may show man to have a more refined intellectual nature than the brutes, they do not thereby sustain a difference in kind: '*man may be the most outstanding of all the animals, yet without being detached from his place in the number of the animals.... For even that self which you specifically style the mind,*

though it may very well imply a higher nature, cannot be anything of diverse type' (/145). Nor does he omit to mention language in this connection (/146).

Gassendi, no dispassionate exegete, has his own materialist principles to support, and support them he does, despite Descartes' vituperations, with a refreshing verve. It is obvious however that Gassendi's methodological approach to the mind/body issue proceeds from below. I am suggesting that Chomsky's anti-materialism is of a kind that grows from challenging a Gassendi-type position on its own terms, by attempting to show that the positive differences a Gassendi acknowledges cannot be accommodated materialistically. But Descartes' answer to Gassendi has a quite different ring to it. He responds by adducing non-positive considerations which Gassendi would cheerfully concede to be incompatible with his theoretical principles. The contrast here, I am maintaining, indicates that the Cartesian dualist theses is sure to be misrepresented by Chomsky.

Let me capsule the problem with an eye on what is to come. Chomsky's reconstruction reacts to the fact that humans, alone among animate terrestrials, are capable of achieving knowledge, the plausible thought being that the ability to use language is a *sine qua non* for knowing. But nothing in Chomsky's treatment discriminates knowledge of the kind comprised by Descartes' realist view of things, viz. certain knowledge, from knowledge of the kind comprised by the view Descartes is committed to superseding. We may dimly appreciate that Chomsky's neutrality here could well be exegetically prejudicial, just in case Descartes links language with the latter view.

6. *God and man: corporeal affiliation and finitude*

Without prejudging Descartes' motivation to be 'from below', let me develop the internal link between rationality and dualism more directly. To this end, it is necessary to penetrate into the shadowy recesses of Cartesian ontology — specifically into the region concerning the difference between man and God.

In a passage examined cursorily above, we come upon a first point

of contrast: 'God', according to Descartes, 'is not body' (*Principles* 1.23/228). By this Descartes means that God, unlike man, is not associated with a body. Elsewhere in the *corpus* a second difference is encountered. In the Preface to the *Meditations* Descartes writes: 'we must consider our minds as things which are finite and limited, and God as a being who is...infinite' (/138). And later: 'I am finite' (Meditation 3/166). Qua spiritual being, man is, as opposed to God, finite.

Prima facie, there are then two dimensions of contrast between man and God. Man is a finite spirit; God, an infinite spiritual substance. Man is associated (at least at times in his career) with a body; God is untrammelled by any such bodily association.

That a finite spirit could cease to be embodied, i.e. could cease (as I shall also say) to have a corporeal or material affiliate, implies the logical independence of the two dimensions of contrast. In the event of cessation, the second difference between man and God would remain in force — disembodiment could not by itself render a finite spirit infinite — while the first no longer obtains. But two features of Descartes' treatment of the contrasts seem to tell against their logical independence. First, God's infinitude appears to function in Descartes' hands as a premise for the conclusion that he has no corporeal affiliation. After pointing out that God possesses 'any infinite perfection' (*Principles* 1.22/228), Descartes concludes that 'God is not body' on the strength of this, that 'divisibility is included in local extension, and divisibility indicates imperfection' (*Principles* 1.23/ibid.). But if the two dimensions of contrast are logically distinct, then God's infinitude, which is that of a spirit, should have no logical bearing on whether or not he may be associated with a body. If it is retorted that Descartes' initial attribution of any infinite perfection to God is neutral on God's spiritual status, it will have to be concluded that the argument begs the very question at issue. Since boundlessness is an infinite perfection of matter, the clear possibility exists that the divinity may be associated with an infinite body, and Descartes gives no reason for ruling against it. (Note that Descartes' claim that local extension includes divisibility isn't the claim that a body can be sub-divided *into* extended parts, but that any localised

body, in being bounded off and finite, is divided *from* other bodies.⁴) Second, even if Descartes never states in so many words, he certainly suggests that the corporeal affiliate of an embodied finite spirit must in turn be finite. But if the dimensions of contrast are logically distinct, the finitude of a spirit should have no implications for the kind of body it is associated with if it is associated with any.

Although Descartes' unstable formulations readily incline us to think differently, I believe that save for the link between the infinitude of God and the impossibility of his being associated with a finite body, all the other options are in fact left open by him. Two results emerge from a very close examination of the relevant argumentation: Descartes allows a corporeal affiliation for God parallel to that which characterises a finite spirit during its (natural, earthbound) career; he also leaves open a sense in which a finite spirit may be associated with a non-finite body.

To work towards the first of these results, let us put Descartes' argument that God is not body under the microscope:

in corporeal nature since divisibility is included in local extension, and divisibility indicates imperfection, it is certain that God is not body (ibid./ibid.).

4. At times, e.g. in *Replies* 3/37 and the adjacent *Arguments Drawn up in Geometrical Fashion*, Descartes seems to equate the claim that local extension includes divisibility with the claim that a body can be divided into extended parts. His attitude here is motivated, I think, by an indiscriminate desire quickly to refute the possibility that mind and matter mightn't be distinct by pointing out that mind isn't in any intelligible sense 'internally divisible'. Nevertheless, the construal I offer is mandatory if sense is to be made of the argumentation under scrutiny. Consider this virtually decisive text from Meditation 2: 'By the body I understand...something which can be confined in a certain place, and which can fill a given space in such a way that every other body will be excluded from it' (/151). It can also be noted that in the abovementioned passage from *Replies* 2 Descartes says not only that body is imperfect because 'divisible into parts', but also that 'each of its parts is not the other'. The last conjunct points directly to the reading I approve. And consider how Arnauld construes the claim as I do (Arnauld speaks of time, but the point transposes to space): 'the idea of an infinite being contains within it that of infinite duration, i.e. a duration bounded by no limits, and hence indivisible' (*Objections* 4/90). More confirmatory remarks will be cited below.

The passage is puzzling for a pair of reasons. Cartesian ontology contains both material and mental substances; neither the corporeal nor the spiritual realm is at any ontological disadvantage. So why does Descartes say that bodies, qua involving divisibility, are imperfect? Doesn't this imply that the corporeal realm contains only imperfect substances, and hence is ontologically inferior? Also, Descartes specifically asserts that divisibility is included in *local* extension. Verbally, this throws up the implication that divisibility isn't included in non-local extension, and hence implies that God might still 'be body' just in case *his* extension is non-local. Why then does Descartes see fit to deny that God is body?

The first puzzle is solved by noticing that there is indeed a sense in which, for Descartes, standard corporeal objects, i.e. particular material bodies, are imperfect. Each such body is limited by other bodies — those bodies simultaneously occupying places from which the former is *ipso facto* excluded. Because Descartes doesn't distinguish matter from extension — the extended world being in effect a *materiate plenum* — his point can be reexpressed thus: since finite spatial places and regions exist *partes extra partes*, each such place and region 'includes divisibility'. Strictly speaking then, only extended nature as a whole is a Cartesian corporeal substance, since it alone is unblemished by the mentioned imperfection. We wouldn't therefore be going too far wrong were we to reclassify finite bodies as *modes* rather than as substances in Descartes' ontology. It follows that the Cartesian material realm isn't ontologically inferior to the mental, the difference between them being nothing more than quantitative.

This outcome helps with the second puzzle. If all of the material world is a single substance, then strictly speaking *no Cartesian corporeal substance has local extension*: the parts thereof are locally extended, but they aren't substances. So Descartes does indeed maintain that divisibility isn't included in non-local extension. But once it is agreed that his formulation here is deliberate, the conclusion is mandated that he intends to leave open the possibility that God might be corporeal in much the same sense that man is. As now interpreted, Descartes' argument isn't aimed at the result that God cannot be body on the grounds that this would implicate him in im-

perfection, but only at the result that God cannot be linked for this reason with any *finite* body.

The urge should be resisted to reply that the above reading must be mistaken, since Descartes asserts, and asserts in so many words for that matter, 'God is not body'. It is perfectly natural for 'body' to be employed as short for 'finite body', or 'body which includes divisibility', i.e. 'body in the normal sense — that sense in which tables and trees are paradigms'. Bourdin, the author of *Objections* 7, uses the term in just this way. '*Body is extended, bounded in place*' (/288). And he is adhering to Descartes' own remark in Meditation 2 that by body is understood 'something which can be confined in a certain place' (/151), a remark which implies that the whole of the material world is not a body. Similarly, slightly later, Descartes himself asserts that 'any material thing...[is] limited by [some]thing' (*Principles* 1.19/227). So it therefore remains true that God is not, in this natural sense, body, and the reading does not strand Descartes high and dry without a contrast. The following sharp difference between man and God is preserved: God's corporeal affiliation, if there is one, does not implicate him in imperfection, as does man's. I agree, however, that the construal is, at first sight anyway, somewhat odd. To neutralise the feeling of oddity, some quite compelling motive should therefore be produced for Descartes' wishing in the first place to link God with non-local extension. This, in the event, is not a problem. We need only determine why Descartes sees fit to link finite or human spirits with body, and extrapolate from there to the divine case. We shall shortly see that his motive is the same in both cases.

7. *Non-local extension and a crucial objection*

In a number of passages scattered through the *corpus*, of which the following may serve as exemplary, Descartes makes this *prima facie* curious claim. 'The mind is co-extensive with an extended body even though it has itself no real extension in the sense of occupying a place and excluding other things from it' (Letter to Hyperaspistes of August 1641/119-20: see also *Replies* 6/254-5 and the correspondence

with Princess Elizabeth/142). Pursuant to the puzzles lately discussed, it is clear that Descartes is incidentally concerned here to avoid saying anything which could be construed to imply that finite minds 'include divisibility' — as this would undermine their substantial status. He thus insists that whatever that sense is in which a mind can truly be said to be extended, it is not the sense of 'extended' from which spatial occupancy follows. Now it is plain that this incidental worry would have been served more effectively had Descartes avoided all flirtation with the idea that minds are somehow extended; any weakening of the claim 'Minds and bodies have nothing in common' will threaten Cartesian dualism. (A parallel will render the threat plain. Normally, spatial location is not assigned to properties like colour. We could however say of a quantity of paint that its colour is at every point which it occupies. Descartes' claim that mind is co-extensive with an extended body is something like this last. But it would be absurd to erect a dualism on the distinction between an object and its colour, and a critic of Descartes might use the mentioned passage to argue that mind/body dualism is correspondingly insupportable.) That Descartes abandons caution on so crucial a matter by itself attests, therefore, that he has a very strong reason for somehow connecting mentality and extension. What could the reason be?

Many of the conscious states of a human spirit are linked in a particularly intimate way with some one part of the material world, viz. that part constituted by its associated body, as well as the regions of the world proximate thereto and the occupants of these regions. The facts here are familiar. When a pin pricks my finger, you may feel distressed; but you feel no pain. When an object is behind my back, I cannot see it; should the object be transported to a point in front of me, or should I turn about, then, if favourable conditions of viewing obtain, I will see it. No (mere) volition of mine can make a nearby stone move. Plainly, Descartes' claim that mind is co-extensive with some portion of the material world responds directly to these psycho-physical commonplaces.

It now becomes clear both that, and why, Descartes budgets for a link between divine substance and non-local extension. The listed

psychophysical facts tilt towards us the physical side of a coin whose mental side is the obvious restriction or limitation in the representative content of my sense-perceptual experience. What I see is, to repeat, a function of the spatial location and positioning of my bodily affiliate; by virtue of seeing some things, I am unable to see others. But God is not subject to any such restriction or limitation. He is 'omniscient' (Meditation 3/162); 'all-knowing' (ibid./165). Since, therefore, my normal epistemological shortcomings are due to my not being in immediate contact with the material world as a whole, and as this fact is expressed by assigning to my mind a special kind of co-extensiveness *with a certain part of the material world*, it follows by parity of reasoning and expression that God's epistemological perfection — his actual possession of 'all the treasures of science and wisdom' (Meditation 4/172) — requires that he be characterised as having the special kind of co-extensiveness *with all of the material world*. If I am locally extended in the special manner, and temporally restricted, God is by contrast omnipresent or ubiquitous and eternal.

A crucial objection will be pressed against the interpretation. It will be complained that the linkage of divine substance with non-local extension for the epistemological reasons specified clashes intolerably with the central Cartesian thesis that genuine knowledge cannot be acquired by means of the senses. Isn't the point of such a linkage in the human case to give expression to the facts of sense-perceptual experience, e.g. that the representative content of my consciousness in cases of visual experience is a function of the state of some body — my body — in the material world? Doesn't the extrapolation to the divine case from the human thus imply, self-disqualifyingly, that divine knowledge is sense-perceptual in character?

Until we have a surer handle on Cartesian scientific knowledge, no confident reaction to the objection is possible. But this gap in our present understanding obviously affects the objector as well. He too cannot be sure of his critical footing until something positive is set down about the nature and products of scientific cognition. It will be a while before the information lacking here is supplied. Rather than attempting to block an objection which may not have to be blocked

at all, let me therefore show that the texts sustain my interpretation and accommodate the objector's thought in about equal measure, so that if the objector has indeed put his finger on a genuine problem, it is a problem for Descartes, not an artifact or by-product of the present reading.

Particularly pertinent here is the fact that Descartes himself connects the senses with the idea that the mind has a finite corporeal affiliation. In the very passage aimed at establishing that God is not body, the claim that human bodies 'include divisibility' is directly linked with the remark that 'it is of some advantage for us to have senses' (*Principles* 1.23/228), i.e. for the finite spirit qua finitely embodied to have senses. In insisting that genuine knowledge cannot be sense-perceptual in character, the objector very likely has one eye fixed on the Cartesian view that genuine knowledge is (in a way mysterious even to him) *innate*. But doesn't the mentioned connection show that, according to Descartes, one of the differences between a finite and an infinite corporeal affiliation is that a non-locally extended spirit, precisely because of this non-locality, attains its information about the material world without the assistance of senses as we know them? In terms of the ' $R = V(o)$ ' schema: when R is coincident with o , the representative partiality definitive of sense-perceptual contact with the world has been overcome. That 'innate' doesn't sound like the *mot juste* needn't be a source of oppressive concern. The relevant fact is that Descartes seems both to accept the objector's point and to make claims which speak in favour of the interpretation the objector disapproves.

Though quick, this way with the objection isn't peremptory. Nothing I have said implies that the objector is mistaken to insist that the interpretation would disqualify itself if it made divine knowledge sense-perceptual in character. From what I have said the most that can be inferred is that the objector is not himself in a position categorically to assert that the idea of co-incidence between R and o , explained in terms of non-local extension, links up positively with sense-perceptual cognition. Still, conscious that nagging doubts may remain, let me append a few remarks to mollify those who persist in thinking my response both quick and peremptory.

In contraposing the data vouchsafed by the senses to innate information, the objector is really pushing the key question back a step, not answering it. To say that genuine knowledge of the material world is possible for me because God has implanted ideas in my mind must lead us to ask: what is the nature of this knowledge from God's vantage point? (In Plato's *Meno* the slave-boy's present knowledge is said to be recollective. This leaves unexplained how the slave-boy initially gained the knowledge.) It could perhaps informatively be said that God's knowledge is innate if by this is meant that God, since he created the world, has a special position in regard to it. But this is certainly not to supply an epistemological sense to 'innate' which intelligibly contrasts it with 'sense-perceptually acquired.' For it doesn't follow from our normal understanding of 'A created B' that A stands in a special epistemological relation to B: witness the periodic recall of automobiles by the manufacturer. Emphasis may be placed on the fact that divine creation is *ex nihilo*. But if we are dealing with a *sui generis* type of creation from which epistemological implications do flow, then the problem is simply thrown back on the *sui generis* link, which we may justifiably claim not to understand.

Two more points. Descartes states clearly that the world created by God is 'outside of Himself' (Meditation 3/162). The claim is repeated in Gassendi's paraphrase at *Objections* 5/157. Undeniably then, the question of what kind of knowledge God has of the (alien) world cannot informatively be answered by repeating the word 'innate'. Though Descartes doesn't devote much space to the issue, he is therefore committed to offering some account of the mechanism of divine knowledge. Should the temptation still be felt to argue that the commitment can be dodged by stressing God's special creative link with the world, a second point might be considered. With an eye on the background Cartesian thesis of a chain-of-being, we could pose the question not about God but about a being who doesn't differ from God in spiritual infinitude, as man does, but solely in not having created the world: 'some evil genius not less powerful' (Meditation 1/148). This being would presumably have to possess accurate knowledge of the world in order systematically to 'lay traps for my credulity' (ibid./ibid.). So here the issue would certainly arise, and

could not informatively be settled by ascribing innate knowledge.

There is no doubt that the objector, in denying that the senses are a suitable Cartesian channel for achieving knowledge, is relying on Descartes' frequent connection of sense-based representation with the technical notions of obscurity and confusedness. But when we appeal to the texts for enlightenment on what these *termini technici* purport, we find Descartes serving up the following *reason* for classifying sense-based data as unclear and indistinct; the information gained by the senses (=the information expressed in propositions which give the factual content of sense-acquired beliefs) is *incomplete* or *partial*. At *Principles* 1.34/233, to take one instance, the phrase 'obscure and indistinct' is explicitly opposed to 'perfect and entire'. As I have just explained, the difference between information gathered by a non-locally extended mind and by a locally extended one is precisely the difference between completeness and fragmentariness: the difference between co-incidence of R and o on the one hand, divergence on the other.

8. *Knowledge and local extension*

These two claims were attributed to Descartes at the start of the examination of Cartesian ontology: Descartes allows a corporeal affiliation for God; he leaves open the possibility that a finite spirit might overcome its finite corporeal affiliation. While I believe that the preceding discussion effectively establishes Descartes' subscription to the first claim, a little more work is needed to verify his commitment to the second. The result's firm establishment is crucial to the contention that dualism and rationality are Cartesian correlates.

One who approaches the second claim from a logical direction might think to dispose of the issue speedily by arguing that if the two dimensions of contrast between man and God are logically distinct, then spiritual finitude is compatible with non-local extension. But even if this is true, it is no less true that the psychophysical correlations which figure in experience as we know it do not exemplify any such abstract logical possibility. So to settle the matter in this way and

leave it at that would be to sever the point from our actual, human, condition. The exact relevance of the claim to that condition will emerge, I suggest, if we remove from the logical to an epistemological context.

Suppose Descartes were to deny that, epistemologically speaking, the finite spirit could overcome the effects of its finite corporeal affiliation; to deny that R could be brought into co-incidence with o. *It would follow that the finite subject could not achieve knowledge*: all his beliefs about the world would be intrinsically probable. In the preceding section I explained that Descartes' account of divine knowledge makes implicit reference to God's non-local extension. God's knowledge of the world is 'immutable' because there are for him no undischarged evidential possibilities. So if knowledge of the world is to be within the reach of a finite being like myself — and its attainability is quite essential for the whole Cartesian project; otherwise Descartes couldn't claim that a being like me, e.g. the meditator, is under a rational obligation to seek it — I must be able successfully to perform an *imitatio Dei*. It must be possible for the divine situation to be reduplicated in my own case. Not that I must achieve an actual divinity: the reduplication needn't be total. Rather, the epistemological effects of the divine situation must be reduplicable in my own case.⁵ This means that epistemologically speaking it must be possible for it to be with me — with the representative content of my consciousness — as if I have overcome the effects of any essential connection with a finite corporeal affiliate.

The point can be transposed so as to attune it with more familiar Cartesian terms of discussion. Descartes holds that if I am to make headway in my search for knowledge, a progressive diminution of obscurity and confusedness in my representation of the world is required. Knowledge will have been achieved only when that representation is finally rendered fully clear and fully distinct. I explained

5. In a letter of 17 October 1630, Descartes sharply rebukes Beeckman: 'I cannot convince myself that you are so out of your mind as to believe [that I] put myself on a level with angels' (/17: passage rearranged). It is amusing to note that mature Cartesian metaphysics requires the finite subject to (be able to) put himself into God's position; to put himself, in effect, 'out of his mind'.

above how unclarity and indistinctness are internally or structurally bound up with the kind of representation of the world which sense-experience supplies. Now to the extent that my actual epistemological condition is a function of the fact that I am finitely embodied, this condition will fall short of knowledge. My senses, due 'to the constitution of their nature' (*The Search After Truth*/313), put me in touch with only a limited portion of the world, and hence give me at best an incomplete and hence inadequate picture. If knowledge is, as Descartes claims, attainable by me, I must therefore be able to overcome the limitation, i.e. to achieve the epistemological condition of a non-locally extended spirit. And note finally that Descartes is careful to say that 'it is advantageous' for a being like myself — a finite spirit — to have senses. The clear implication is that there is nothing epistemologically irrevocable about the fact.

9. *Two conceptions of body: the wax-experiment explained*

We return for that 'more secure' treatment promised to the difficulties aired in section 3, where the bare essentials of the present line of interpretation are sketched. It was granted that if the interpretation is approved, Descartes' discussion in Meditation 2 has to be evaluated as misleading in several respects, and this may have detracted from the interpretation's appeal. We are now in a position independently to see that there really is a lapse in Descartes' own thinking — a fact which confirms the reading's accuracy. Indeed, it emerges that Descartes' project would be in severe jeopardy were the reading worked out in past pages not the one that he would, on balance, endorse.

Knowledge — *bona fide* scientific knowledge, no less — is possible according to Descartes. A subject who governs his doxastic decisions by PD is not left empty-handed. In particular, and dogmatically or not, Descartes maintains that one who takes the requisite pains will achieve such knowledge about the material world. Once this is appreciated, the problematic character of the surface form of the argument in Meditation 2 is hard to miss. In this Meditation Descartes moves from an uncertainty about body in general — hence an uncertainty

about his body — coupled with the certainty supplied by the *cogito*, to the conclusion that mind and body — hence his mind and his body — are really distinct. But *what* conception of body is it that is assessed here as ‘uncertain’? Plainly, the sense-based conception dealt with in Meditation 1. *This, however, is not the only conception which exercises Descartes.* Descartes does not hold that all beliefs about body are uncertain in the way that those bearing on body as conceived in Meditation 1 are uncertain. Otherwise, the subject who abides by PD would draw a blank. So if the mind/body distinction of Meditation 2 is to be metaphysically basic, it must be a distinction holding not primarily (or even at all, for that matter) of the inadequate, sense-based, conception of body, but of the adequate conception comprised by Cartesian science as a *fait accompli*.

Attend again now to the move made by Descartes in Meditation 2. The meditator’s knowledge of body is uncertain; the *cogito* supplies a certainty; therefore, the meditator’s nature is separate from body. But the first premise here isn’t Descartes’ last word. In his view nothing prevents the meditator from gaining certain knowledge of body, and as a matter of fact he does eventually achieve it: ‘certainly ... I possess a body’ (Meditation 6/190). Reformulating the move so as to harmonise it with this truth, what do we come up with? The meditator’s knowledge of body is (in the end) certain; the *cogito* supplies a certainty; therefore, Now it cannot be inferred that the meditator’s nature is divorced from corporeality. To warrant the inference, more is required. The addition, I maintain, comprises the wax-experiment and its train, whose full elaboration has been supplied in the discussion of Cartesian ontology just concluded.

One wants Descartes’ dualist result to be in other words the valid consequence not only of a sub-set of propositions which the meditator genuinely knows, but of all that he knows and can know for certain. Otherwise, the result might well be overturned once the rest of what the meditator knows is brought into play. ‘May there not be some necessary relationship, unsuspected by Descartes, that will link his idea of thinking substance to that of extended body?’⁶ On the

6. Kenny, *Descartes: A Study of His Philosophy*, p. 95.

standard reading of Meditation 2, with the *cogito* deemed to deliver up the meditator's existence as a certainty quite apart from any consideration of the world beyond, there may indeed. But that isn't the correct reading. The wax-experiment gestures in the direction of what certainties about the world are like; and the dualist conclusion is based on what the possibility of achieving genuine knowledge here requires.

A significant point of comparison is revealed between the case in Meditation 1 for the uncertainty of normal beliefs and the case for dualism in Meditation 2. The former case would be irreparably weak if the claimed uncertainty were rested by Descartes on the possibility of a malign genius's so arranging matters that while everything seems as it normally does nothing is as it seems. Not only would rejecting the fantasy be at least as reasonable as accepting the conclusion, but also, more pertinently, the uncertainty at issue here is truth-neutral, like that which the dream-argument involves. As shown however, Descartes' conclusion is in fact extracted from his structural analysis of sense-perceptual experience, an analysis with implications for truth. Similarly, the case in Meditation 2 would be disastrously feeble were the thesis that the meditator's nature is dual rested on the truth-neutral uncertainty affecting his existential beliefs about the material world. But here too the uncertainties about body used to support the dualist conclusion are truth-involving; they concern a conception of body foreign to Cartesian science. While this saves Descartes from standard criticisms, it indicates at the same time, as noted in the preceding paragraph, that dualism has to be established by the meditator relative to what is known with certainty about the material world. Since what is known with certainty *by the meditator* may not encompass all that can in principle be known here with certainty, this still leaves a lacuna in the argument, on which I will comment below.

Though the two cases compare significantly in the preceding respect, an even more significant disparity exists between them, towards which I glanced in section 1. So far as the doubt in the first Meditation goes, the uncertainty of sense-based beliefs is demonstrated without essential reliance on the full-fledged conception of Cartesian science. The metaphysical hypotheses Descartes employs

are designed only to lend whatever kind of support they can lend (persuasive support alone perhaps) to the independent negative argumentation; it is the latter itself which carries all the demonstrative weight. But the attempt in Meditation 2 to establish dualism along the preceding lines is inextricably intertwined with that conception: the dualist result could not be reached independently thereof. So dualism is in a far more problematic case. Here the metaphysical increment, taking the form of an appeal to the divine cognitive situation, gives a fairly direct expression to Descartes' view of what properly scientific knowledge is like.

The exact significance of the wax-experiment can be appreciated only when this is clear. Sometimes it is claimed that the experiment is designed to supply a better idea of materiality, so that the dualist conclusion will not hold only of an 'inadequate' conception of body. According to Descartes, for example, material bodies are not in reality the bearers of properties like colour (see *Principles* 1.69/248). For the meditator to have established that he is not coloured would therefore be for him to have established his distinctness from body as body is normally conceived, a conclusion evidently compatible with his being body as body is scientifically conceived. In general, were Descartes to argue that mind is distinct from matter as the latter is improperly understood, even a critic satisfied from a logical viewpoint with the reasoning could justly complain that for all that mind might not be distinguishable from matter qua properly understood. But this, while providing a convincing rationale for the wax-experiment, fails to plumb the deeper reasons for its importance, viz. because of the correlative relation between the character of the knower and the character of the known. The wax-experiment shows writ small that the mind's way of grasping reality is non-selective. The meditator, qua world-cogniser, is in this respect comparable with God, whose grasp of reality is paradigmatically non-selective. What the mind is shown to be capable of doing in the case of 'this piece of wax' God can accomplish of reality as a whole. I repeat that since 'grasps in a non-selective way writ small' doesn't mean 'grasps in a non-selective way *simpliciter*', the door remains ajar to the possible outcome that the human mind's grasp of reality is at base selective,

which would imply that these minds aren't ultimately distinguishable from body. Rather than recoiling at the prospect of such a development, I think we should resign ourselves to it. The unremoved potentiality in the claim that the human subject can win through to a scientific grasp of things corresponds to an unremoved element of potentiality in the strongest dualist conclusion to which Descartes is, in his own terms, entitled. Even if he makes no concessions whatever to those of his critics who blast his arguments as entirely unsuccessful, Descartes is obliged to agree that the strongest conclusion to which he can justifiably help himself — supposing his reasoning to be clear of mechanical faults — is that so far as the facts of the case go human subjects cannot be denied to be dual, from which it doesn't follow that their duality can be asserted. One may entertain doubts as to whether he has, even in his own terms, established this, and the reasons for scepticism will be aired in due course. But to have made out a thesis compatible with though falling shy of unqualified dualism wouldn't I reckon be despised by Descartes himself as profitless toil.

10. *Fitting in the cogito*

One issue of quite central importance remains: the position of the *cogito*. *Pace* the reading I have advanced, isn't it the case that Cartesian dualism is based directly on the certainty of the meditator's existence — '*sum*' — which is extracted from the premise 'I think'? However, if what precedes be our guide, dualism is in effect established by examining the nature of knowledge *of the world*. The meditator is deemed dual as a consequence of the fact that he is deemed capable of achieving genuine knowledge. 'But', an objector is sure to interject, 'doesn't the *cogito* supply a certainty prior to any consideration of the relations between the meditator and the world? And doesn't the dualist conclusion have some basis in the *cogito*?'

The objection has already been adumbrated in passing. It was argued that whatever the independent philosophical worth of my talk of different kinds of object-oriented intensional structures, such

matters have nothing to do with the *Meditations*. The *cogito* establishes the meditator's existence in a doubt-proof way, and lays the ground for a proper determination of his nature, because of a special feature of thinking: the thinker cannot be mistaken about his wholly mental conditions. So even if it is true that the character of the knower and the character of the known are correlates, the truth is tangential to Descartes' actual reasoning, which pivots on the idea of mono-polar subjectivity.

To meet this charge, I propose to show, first, that should the apparent mono-polar character of subjectivity in the *cogito* be taken at face value, the wider Cartesian project would be in serious trouble, and second, that Descartes' treatment, to the extent that it seems to invoke subjectivity in the way described by the objector, trades on a deep-going equivocation which Descartes fails to notice, and for that reason fails to resolve.

As mentioned, one wants the dualist position defended by Descartes to be valid relative to what the Cartesian scientist knows; relative, that is, to the *total* content of his knowledge, not merely a part of it. As a result of an equivocation on 'knowledge' and 'certainty', the objector's construal of the *cogito* is incompatible with the satisfaction of the desire. So long as the equivocation passes unnoticed — and Descartes' mode of presentation renders it exceedingly elusive — it continues to seem that the knowledge which the *cogito* provides is indeed identical in kind to the knowledge comprised by the completed Cartesian scientific picture of the world; continues therefore to seem that the objector's reading comports well with the wider Cartesian programme. But once the equivocation is recognised, the absence of real uniformity, and with it the need for reinterpretation, becomes plain.

To root the equivocation out, we return to a point made early on in passing, viz. that PD, the principle of doubt, is best taken negatively, as the principle that what is not known with certainty cannot be rationally accepted. I suggested that there may be different ways in which certainty can be construed, and that the negative formulation is superior to its positive counterpart for keeping us alive to the fact. Here is where the suggestion proves its worth.

For Descartes, a subject can be said to be 'certain' about some object or state of affairs just in case his evidential condition leaves open no counterfactual possibilities of gaining direct evidence about the object or state of affairs. This can occur in two entirely different types of case. It can occur if, with respect to an object or state of affairs concerning which diverse possibilities exist of gaining direct evidence, all the direct evidence is in fact in the subject's possession (this would seem to be God's position *vis-à-vis* the corporeal world). But it can occur also if the object or state of affairs lacks complexity in its (direct) evidential basis; if, in other words, there are no 'diverse possibilities' of gaining direct evidence about it. Mental conditions such as pain fall into the latter category.

A subject in pain is in an authoritative position about his condition: no other subject can point to evidence relevant to his belief about the pain state which might lead him to say, for example, 'My impression is of an intense pain; but in virtue of the evidence you cite perhaps it is mild'. This principled evidential superiority isn't to be explained by claiming that the subject in pain takes up every possible evidential vantage point *vis-à-vis* the state and hence that no other subject can be in possession of additional direct evidence. Rather, it is to be explained by indicating that where sensations are concerned there is no *point d'appui* for the phrase 'counterfactual possibility of gaining direct evidence'; there are no vantage points at all with respect to the state.

Cases of both types might informally be ranged under a single banner: 'no counterfactual possibilities left open by the holder of the belief'. But these words disguise a fundamental difference. In cases of the one type the absence of direct evidential alternatives is due to the fact that all of the evidential bases have been covered; in cases of the other type, there could be no such alternatives. To mark the difference, let us call the kind of certainty achievable in a case of the first sort 'o-certainty', with 'o' emblematic of 'object'. The certainty achievable in the second kind of case can aptly be called 'm-certainty', with 'm' emblematic of 'mental'.

On the reading of the *cogito* I am challenging, on which the knower-known correlation doesn't inform Descartes' thinking,

Descartes exploits the notion of m-certainty to justify the claim that the meditator is in possession of a piece of knowledge that is certain. Because thinking is like pain self-revelatory, the meditator cannot be mistaken in his belief that he is cogitating.

Given the distinction between m-certainty and o-certainty, the problem facing Descartes is plain, if this is how he is finally taken to be arguing. The principle of doubt, PD, obliges the rational subject to accept only certainties. If 'm-certainty' is meant by 'certainty', then the *cogito*, as traditionally read, would mark the *Meditations*' endpoint. At the start of Meditation 3 Descartes himself states that the *cogito* supplies a model — a 'paradigm' — of truth. On its basis 'already I can establish as a general rule that all things which I perceive very clearly and very distinctly are true' (/158). But if the m-certainty of the meditator's belief that he is thinking constitutes the basis for the 'general rule' — if that rule is paradigmatically exemplified by the m-certainty of the *cogito* — then the total knowledge possessed by the meditator will have to consist exclusively of m-certainties or certainties capable of being reached on an m-certain basis. Not a single o-certainty could conceivably work its way into the company.

To be sure, faced with the vertiginous fissure between m-certainty and o-certainty, the interpreter has a number of choices. He can maintain that Descartes really has been fooled by the apparent univocal applicability of the words 'no counterfactual possibilities of gaining direct evidence' into thinking that m-cases and o-cases are mutually accessible. But selecting this depressing option, which therefore implies that all the results reached beyond Meditation 2 are vitiated by, because indebted to, the equivocation, must rank a poor second to selecting the option worked out in preceding pages. This of course requires that some of what Descartes says about the *cogito* be evaluated as misleading. But painful choices must be made irrespective of how the case as a whole is construed. And, I believe myself to have shown, there is a great deal of evidence in the texts which supports the present appraisal.

One last comment may be set down to quell lingering unease about the correctness of this trade-off. The argumentation of the

Meditations is, we saw, informed by a realist conception of truth. Descartes discards sense-based factual propositions on the grounds that they resist realist truth-evaluation. The reader who demands consistency therefore has the right to expect that all the 'certainties' which Descartes claims to reach when he moves to construction will be true in a realist sense. But if the nature of m-certainty is carefully considered, it emerges that the realist notion of truth makes no sense here at all. A state such as pain is known by the subject in an m-certain way because its evidential grounds are identical with it; because the subject's evidence that his pain is, say, intense is the intense pain itself. This is however a limiting anti-realist case, not a paradigm of realism, since sense cannot be attached to the idea of the state known which prises it apart from the evidence on the basis of which it is known. Indeed, the case of pain is exemplary of the kind of case phenomenologists rely upon in attempting their anti-realist foundationalist reconstructions. But a phenomenalist style of reconstruction is quite out of keeping with the true thrust of Cartesianism in its constructive aspect.

11. Existential neutrality: a red herring

All doubt should by now have dissipated that the issue of existential neutrality is an irrelevance. I commented earlier on the importance Descartes appears to attach to securing the existential neutrality of the wax-experiment. But it isn't lost on him that seemings are also susceptible of existentially neutral construal. So even if existential neutrality is granted throughout, Cartesian dualism would still be a casualty unless Descartes could show that his conception of the wax isn't a function of existentially neutral seemings. Otherwise, he would be forced to concede that it irrevocably seems to the meditator as if he is locally extended; i.e. as if he has a body. The kind of argument framed in Meditation 6 for matter's existence — the argument from the fact that 'God is no deceiver' (/191), and hence that ideas produced in the meditator which seem to issue from corporeal causes must so issue — would then apply to show that the

meditator must possess a body. If not, God would be guilty of deception in so arranging matters that it seems to the meditator as if he possesses one. In fact, Descartes comes very close to making the point explicitly in this Meditation. Concerning 'faculties [in me] such as that of change of position', he observes that they 'cannot be conceived ... apart from some [material] substance to which they are attached, and consequently cannot exist without it' (/190). Immediately he adds: 'these faculties, if it be true that they exist, must be attached to some corporeal or extended substance' (/ibid.). In light of the last conditional, the point about the inconceivability of the mentioned faculties divorced from material substance is existentially neutral. The remark has therefore to be interpreted as follows: if it seems to me, insofar as the deliverances of my mode of cognition go, as if I have such faculties, then it seems to me as if I am, *qua* cogniser, embodied. If my representative states, taken as existentially neutral, are in their intensional structures identical to the states of a subject who occupies specific and successive spatial stations *vis-à-vis* a material object, then on that evidence I would have to draw the conclusion that my embodiment is irrevocable.

Though Gassendi's pointed objections force Descartes to sharpen his formulations in *Replies* 5, he nevertheless makes an important slip. After explicitly indicating to Gassendi that the wax-experiment helps to clarify the meditator's nature — he is referring back to the claim in Meditation 2 that 'all the reasons which contribute to the knowledge of wax ... are ... proofs of the nature of my mind' (/157) — Descartes proceeds: 'Just as in wax we are able to distinguish many attributes, one that it is white, another that it is hard, a third that it can be liquefied, etc., so also in mind we can recognise as many — one that it has the power of being aware of the whiteness of wax, another that it possesses the power of recognising its hardness ..., etc.' (*Replies* 5/213). But isn't it a considered Cartesian view that whiteness isn't really a material characteristic? The conception of material objects as coloured is a pre-scientific 'vulgarity', part-and-parcel of the probable, sense-based, view of things, and hence is incompatible with the truth of dualism. A subject who can literally be aware of 'the whiteness of wax' cannot be a mind in Descartes' sense. Evidently, Descartes is

here overlooking the distinction, which he takes such care to tell Hobbes that the wax-experiment is designed to make, between 'the features in wax ... given by the imagination and those solely due to a conception of the mind' (*Replies* 3/66). Assuming that whiteness has some place in the Cartesian scientist's picture of the world, the wax-experiment, to yield an advance, must provide a basis for showing that the colour is not a feature of the body. Now the proper status of colour should be establishable without assuming that coloured things exist. As we now see even more clearly than before, there is therefore a pair of distinctions here, not one distinction only: first, the distinction between existential commitment and existential neutrality; second, the distinction *on either side of the preceding distinction*, between the intensional structure of seemings and the intensional structure of 'pure thought', which last cannot be described in terms of the 'R = V(o)' schema. It follows that if we take seriously Descartes' claim that 'certainly ... I possess a body' (Meditation 6/190), there is no longer any need whatever to insist on existential neutrality, and Descartes' concern to ensure it in Meditation 2 reflects nothing but the fact that the earlier stages of his argument precede its later stages.

Interpreters who see Descartes' dualist reasoning in Meditation 2 to rest on the certain existence of mind and the possible non-existence (= the uncertain existence) of body are quite right to cry foul. But Descartes' doesn't commit this gross modal fallacy. Even had body's existence explicitly been acknowledged by Descartes in Meditation 2, as it is in Meditation 6, to be at par in certainty with mind's existence, thereby expunging from the text one of the premises essential to the invalid argument sketched, the reasoning for the real distinction would still have unwound essentially as it unwinds. For the reasoning is in fact routed through a consideration of the character of 'clear and distinct' cognitive activity.

The implication for the *cogito* is plain. Descartes' thinking here will be distorted beyond redemption if the reader allows himself to be influenced by the latter-day problem of 'other minds'. So far as the relevance of the *cogito* to dualism goes, the operative contrast isn't between mental and psychological states and conditions and non-

mental or physical ones. Granting that God is the 'active' subject *par excellence*, it also has to be granted that the notion of subjectivity which informs the *cogito* isn't the notion of mono-polar subjectivity which connects up with m-certainty. Examine this pregnant passage: 'all that which can be known of God may be made manifest by means which are not derived from anywhere but from ourselves, and from the simple consideration of the nature of our minds. Hence I thought it not beside my purpose to inquire how this is so, and how God may be more easily and certainly known than the things of the world' (*Meditations* Dedication/134). Obviously, we are not here in the orbit of m-certainty; it would be absurd to try to explain the 'ease' with which the divinity is known by lumping him together with the mediator's pains. Descartes' notion of personal subjectivity is clearly influenced by the belief in an 'affinity' between human and divine mentality. It is no mere literary fact that the very idea of meditation, qua project in which the subject undertakes, free of external pressures, to 'execute his own design' (see Discourse 1/83), resonates with the idea of a divine design (see *ibid.*/90-4).

IV Ideas and Ontology

Descartes' positive conception of knowledge — 'certain' as distinct from 'probable' knowledge — is investigated from an ontological viewpoint. The world of the Cartesian scientist is shown to have an ontology different from the ontology of the sense-experiencer. By close scrutiny of the texts, it is demonstrated that the instruments of an 'adequate' style of cognition — 'ideas' — are such that their objects — 'ideata' — must be, in a special sense, substantial entities (or their mereological components). Descartes therefore overstates his case by continuously describing the representative instruments of the Cartesian non-scientist (the sense-employing or 'probable' cogniser) as 'unclear and indistinct ideas'. Descartes' account of mundane cognition is independent of his positive views about 'real knowledge'. The ontology of the former should therefore have been described by him in a language which does not relate it *ab initio* to the ontology of the full-fledged Cartesian scientific portrayal of things.

1. 'Idea': asking the right question

The disjointness of probable and certain knowledge is essential for the success of Descartes' destructive reasoning in the *Meditations*; it is also the ultimate source of the invalidity of his overall conception. The pull of opposed forces is easy to feel. Unless 'probable knowledge' classifies knowledge of a distinctive kind, 'certain knowledge' knowledge of another kind, equally distinctive, the move could not validly be made from the fact that a given proposition is known only probably to the conclusion that it will not eventually be found to be part of the 'certain' or scientific representation of things. But if probable knowledge has its own distinctive character, why is the probable cogniser rationally obliged to replace the propositions comprising his conception of things by something else? Think here of Descartes' parallel between the art/science and the probable/certain dualities. A Cartesian artist will agree that because he treats his subject-matter in a characteristic fashion, his results aren't scientific in Descartes' sense. However, he may say that his concern with the subject-matter is

artistic, not scientific, and hence that the contrast here, though genuine, lacks critical bite. Those Descartes takes to task may in other words resist his strictures by maintaining that their approach supplies them precisely with the kind of information about the world they want.

The point can be recast less informally with the aid of the ' $R = V(o)$ ' schema. Descartes requires that scientific cognition overcome the influence of V , this being a necessary condition for achieving co-incidence between R and o . But why can't a coherent, autonomous, conception of experience and knowledge acknowledge The V -parameter? And, of course, the pressure to acknowledge it will build as the coherence of the idea of eliminating V comes to be queried. An unrelenting critic might express himself by remarking that the o -component of the schema is understood in the first place, and throughout, only in the context of the schema; that the o -conception Descartes requires is 'transcendent'. We can agree — the critic will say — that one representation R_1 differs from another R_2 accordingly as V alters. But in making such comparisons, we are considering R s all of which are under the influence of The V -parameter; we are not measuring V -influenced R s against a V -uninfluenced R and judging the former inadequate because they diverge from the latter. The importance of a piece of text such as the wax-experiment can better be gauged once this crucial objection is advanced. Rightly or wrongly, Descartes believes the experiment to show that the mind operates in terms of specific object-directed intensional structures, and hence believes that the assessment of V -influenced R s of o can be undertaken in terms of a V -uninfluenced R thereof. But Descartes could not have been so sanguine as to think that his overall case about 'scientific' knowledge of the world could be rested on this and nothing more. One swallow does not make a supper. Nor is 'this piece of wax' the world. The experiment is at best a signpost pointing towards a certain (ideal?) terminus. More must be done in order to secure the idea of such a terminus; and even if that idea can be effectively secured, more yet must be done to assure that the terminus can be reached.

This chapter initiates a protean investigation of Cartesian ideational representation, with the goal of making precise the difficulties

surrounding the crucial Cartesian contention that the workaday or 'probable' conception of things cannot rationally be abided. The feature of Descartes' treatment of ideas which holds a special interest will emerge once a widespread misunderstanding of the historical texts is noted.

The following vital fact about Descartes' position — indeed, about a large number of post-Cartesian positions up to Kant — keeps eluding interpreters and critics. Descartes' handling of the notion of an idea is internally bound up with the contrast between a proper — a certain — and an improper — a probable — grasp of reality; his understanding of ideational representation isn't neutral on this contrast.¹ So one way of enquiring into the relationship between probable and certain knowledge is by probing the links between modes of representation which fall short of ideation and ideational modes proper; by examining the points of contact and divergence between vehicles of representation which and ideas are those which aren't.

One reason for the indicated failure on the part of Descartes' readers is his own insecure grasp of the precise character of the relationship. But another reason, for which Descartes cannot fairly be faulted, exercises a baneful influence. This is the perennial — and to judge by the literature irresistible — tendency of Descartes' modern investigators to focus on Cartesian ideas hypnotised by an overly specific epistemological preoccupation. Descartes states: 'we cannot have any knowledge of things except by the ideas we conceive of them' (Letter to Gibieuf of 19 January 1642/124). The question may be asked — and I take it that no serious student needs to be told that the question is invariably asked in the context of treatments of what is typically described as Descartes' *representationalism* — how Descartes can know that the ideas possessed by the meditator give an accurate portrayal of an outside reality. But we have already seen that Descartes designates certain intensional structures, certain 'modes of thinking', as superior to others in respect of the imperatives of knowledge and science, and that he does so quite apart from a

1. I will show in the concluding chapter how this internal link can be confirmed on broadly etymological grounds.

provision of a satisfactory solution to the difficulty. Once his practice here is understood, it should immediately become clear why over-concentration on the epistemological question leads willy-nilly to a damagingly slanted reading of the texts. Whatever ideas might be — whatever kind of representation ideational representation is — the epistemological question will be posed solely because ideas *mediate* between the conscious subject and his object. One who leaps to raise the epistemological question as soon as he hears the word 'idea' will therefore ignore another question. Dominated by the difficulty Descartes has in determining *whether* ideas, which purport to represent, actually represent anything at all, he will overlook the independent question of *how*, i.e. *in what way*, ideas purport to represent. Descartes has a great deal to say about this, and what he says is separable in logic from whatever he might have to offer in addressing the epistemological question.

I am going in what follows to ignore the 'whether' question. I will show that Cartesian ideas are representational instruments of a quite specific kind, and that a good deal of what Descartes says falls neatly into place consequent upon a recognition of the fact (which is not of course to say that Descartes' thinking here is defensible).

2. *Ideas and truth*

Complete onus for the widespread failure to recognise the non-epistemological meaning that attaches to the question 'How do ideas represent?' cannot be laid at Descartes' door. But only a blind disciple could maintain that the textual position is clear. 'Of my thoughts', Descartes states at one point, 'some are, so to speak, images of the things, and to these alone is the title "idea" properly applied' (Meditation 3/159). Later, we come upon what seems to be a total *volte face*: '*Idea* is word by which I understand the form of any thought, that form by the immediate awareness of which I am conscious of the said thought.... And thus it is not only images depicted in the imagination that I call ideas; nay, to such images I here decidedly refuse the title of ideas, in so far as they are pictures in the

corporeal imagination' (*Arguments Drawn up in Geometrical Fashion*/52).

This instability in Descartes' handling of 'idea' is bound to affect the reader's ability to attach an unequivocal sense to any question containing the term. Still, without attributing to Descartes' formulations a clarity they really do not have, I believe it can be shown, even with reference to the *prima facie* clashing passages just quoted, that his thinking is less confused than first appears.

In the passage from the *Meditations* the concern uppermost in Descartes' mind is to distinguish truth-evaluable representative states from states of desiring or willing, to which truth values cannot be assigned. Since the *accuracy* of an idea can be considered — its *correspondence* with some objective state of affairs — and since it isn't accuracy but only, say, *appropriateness* that can be spoken of in a case of desire, Descartes does have a genuine enough distinction to make. This is borne out by the more formal classification at *Principles* 1.32: 'sense-perception, imagining, and conceiving things that are purely intelligible, are just different modes of perceiving; but desiring, holding in aversion, affirming, denying, doubting, all these are the different modes of willing' (/232). But in the *Arguments* Descartes' purpose is not to distinguish representative states which can be assessed for truth value from those which cannot, but to make a distinction among the former. And so, he withholds the appellation 'idea' from images.

Why does Descartes feel a need to distinguish among truth-evaluable states? Answering the question will sharply illuminate the neglected sense of 'How do ideas represent?' Descartes feels the need to make a distinction here by way of indicating that the term 'idea', strictly understood, exclusively classifies those states which are (potentially) evaluable as true, *as opposed to evaluable as (merely) probable*. Examine this claim: 'if the word thought be taken indifferently for every psychical operation, it is certain that we can have many thoughts, from which we can infer nothing relative to the truth of matters outside of us. But that...is not to the point here, where the question concerns only those thoughts that form clear and distinct perceptions' (Letter to Clerselier concerning *Objections* 5/128). In

Meditation 3, we just saw, 'idea', precisely understood, means 'form of thought from which we can infer to the truth of matters outside of us'. 'Thought', in this precise sense, is also called 'pure thought' by Descartes.² The exact force of 'pure' can be pinned down with the help of the ' $R = V(o)$ ' schema. A truth-evaluable representative state will be 'pure' just in case o and R co-incide; impurity intrudes where, typically as a result of the effect of V , R diverges from o . This is confirmed by Descartes' wording above. Ideas, in their representative content, are relativised to 'the truth of things'. In the case of an idea, R is a direct reflection of o . So where thoughts do not count as a proper avenue to knowledge about the world, the flaw is due to the influence of the V -factor on their representative content.

3. *The grammar of 'idea': ideata are substances*

A cognising subject can be said to have an idea — to be ideating — when the representative content of his consciousness is adequate to the state of the world. (Let me reemphasise the difference between adequacy and truth. An adequate representation is one that could in principle be evaluated as true. But it may also turn out to be false. The inadequacy of a representation mustn't therefore be confused with its falsity. To say that a representation is inadequate is to say that it couldn't be more than probable, which is of course compatible with its either being very probable or very improbable.) Aside from repeating that the representative content of a subject's consciousness will be adequate when R and o co-incide, what can be set down by way of informatively specifying the conditions a representation must meet in order to qualify as an idea? An answer emerges if we consider the close interrelation between ideas, on the side of representing consciousness, and substances, on the side of the represented world. These, we find, are strict correlates.

In everyday speech there would be nothing at all odd in saying of a

2. In *The Passions of the Soul* Descartes' formulations about this matter are considerably sharpened. We shall look at some relevant passages below.

cogniser that he has 'an idea' of (an object's) shape or texture. This means only that he knows what that shape or texture is — can recognise the shape or texture when he encounters an object which has it, can compare and contrast objects in respect of the feature, and so on. Although important qualifications will have to be added below, the large point about ideation is then this. If (what I shall call) *the official grammar* of 'idea' and its cognates is adhered to, Descartes would disallow such a description of cognitive condition. Despite the impeccability of the above mentioned sayings in the context of unguarded parlance, no subject can be said to have, in the official sense of the term, 'an idea' of shape or texture. I do not maintain that Descartes is scrupulously observant of this official prohibition in his own formulations. Far from it. As already shown, he quite knowingly permits himself to use 'idea' in inexact or 'vulgar' ways, e.g. to cover images. Restated with this in mind, the large point is that in the name of Descartes' own deeper principles a distinction must be enforced between representative states which qualify as ideational and those which don't.

What is the source of Descartes' commitment to disallowing that a cogniser can be said to have an idea of a property like shape? To a first approximation: because shapes are essentially the shapes of objects, objects which are not themselves shapes, but which are shaped, or have shapes — because, in short, shapes are ontological dependencies — there can be no ideas of them.³ In confirmation, the following piece of evidence may be entered: 'we easily apprehend figure, without thinking at all of circle (although the mental act is not distinct unless we refer to some specific figure, and it does not give us a complete thing, unless it embraces the nature of the [figured] body)'

3. Just above, I indicated that qualification would have to be made to the claim that Descartes disallows the phrase 'idea of a shape'. Similarly, this answer is only 'a first approximation'. In terms familiar to us, the problem here is as follows. It is unclear how some thought-content's representing an ontological dependency links with the 'R = V(o)' schema. In due course, we shall see that Descartes is willing to speak of ontological dependencies as (possible) ideata, providing these dependencies are, in a sense to be explained, *monopolar* dependencies of substantial entities, i.e. providing their status as dependencies has nothing to do with the schema.

(*Replies* 4/99). While a subject can think of the shape of an object in this way, the 'act of thought' here is not 'distinct'. Because 'idea', strictly speaking, means 'form of a clear and distinct perception', the representative content of the subject's consciousness does not, in the case described, match the content of any idea.

Officially, 'idea' applies only to what Descartes denominates 'complete' or 'distinct' cognitive acts. An ideatum, officially, must therefore be a complete or distinct object. A representative state of consciousness which aspires to ideational status will fall short unless what it represents is of this kind. As a result, there can be no idea of an incomplete or fragmentary object. Only 'complete' objects, i.e. substances, are (possible) ideata.

It would therefore be erroneous to think that one's classification of a representation as distinct or complete accorded with Descartes' when it distinctly or completely represents its object in the way the pale pigments of a portraitist give an accurate or exact rendering of the pallor of his sitter's complexion. One who classifies in this fashion is employing terms like 'complete' and 'distinct', 'accurate' and 'exact', in an *ontologically neutral* manner, in the sense that his agreement that a representation portrays its representatum in these ways is entirely silent on what the latter might be. Thus, to recur to the passage quoted above, Descartes insists that to have *an idea* (i.e. distinctly to think) of a figure is *ipso facto* to have an idea of a body figured; such an idea is even said by him to 'embrace the nature of the body'. One who 'conceives' figure apart from body is not ideating it, even though his conception, of circularity say, be geometrically exact. (Consider here Descartes' early dismissal of those mathematicians who busy themselves 'with bare numbers and imaginary figures' (Rule 4/11). He is surely not disputing that they would accept Euclid's theorems.) Similarly, Descartes writes at *Principles* 1.61 that 'we cannot...have a perception of [a] mode [of substance] without perceiving the substance' (/244). Having allowed in *Replies* 4 that a subject can 'apprehend' figure despite giving no thought at all to the figured body, Descartes may seem to be asserting a point and asserting its opposite. The appearance of inconsistency vanishes once the synonymy of 'having a perception' with 'having a clear and distinct

perception' or 'ideating' is recognised. Descartes never denies that a cogniser can represent the world in less than an adequate — a 'clear and distinct' or 'complete' — fashion. His view is that most of us are in the regrettable position of doing so most of the time. On the strength of the lines examined, 'apprehending' names an inadequate style of world-representation.⁴ Descartes can thus allow that what is impossible in any *bona fide* case of ideational representation may very well hold for a representing subject whose states fall short of ideational requirements, i.e. one who apprehends the world.

The claim that a representation 'clearly and distinctly' represents its object — the claim that the representation is an idea or, for preference, that the cognitive condition of the representing subject is ideational — is not neutral on the ontological character of the object. To ideate is to represent or conceive via a 'distinct' act of thought. *And such acts must have complete or distinct objects, i.e. substances, as their representata.* That terms like 'clear', 'distinct', and 'complete' cannot be construed in an ontologically neutral fashion is conclusively verified by Descartes' explicit assertion that 'to understand in a complete manner' and 'to understand that a thing is something complete' mean the same (*Replies* 4/98). Immediately he adds: 'by a complete thing I mean...a substance endowed with those forms or attributes which suffice to let me recognise that it is a substance' (*ibid./ibid.*). To be sure, nothing prevents talk of 'having an idea of a non-substance'. But such talk is loose and inexact. While Descartes himself often speaks in the informal way, he is relatively judicious to underline its principled inexactitude when pressed. Witness the response to Arnauld: strictly speaking, he explains, one who genuinely 'has an idea' of a non-substance, e.g. of a substantial mode, *ipso facto* cognises the substance to which it attaches.

4. Indeed, we shall see later on that a relatively systematic distinction between *apprehension* and *comprehension* appears throughout the Cartesian *corpus*. Compare the above claim about the cognising subject's ability to apprehend figure without cognising some figured body with the remark that 'a mode...can by no means be comprehended, except it involve in its own concept the concept of the thing of which it is a mode' (*Notes Against a Programme*/440).

This has direct implications for, and hence enables us further to sharpen, the neglected sense of the question 'How do ideas represent?' In claiming that the cognising subject who possesses an idea can 'infer to the truth of outside matters' Descartes is maintaining far more than this, that an idea is an accurate or exact rendition of its object. The accuracy or exactitude of a representation, on the normal understanding of these assessments, is compatible with the represented item's not belonging to a realist conception of things. Suppose that the non-realist analyses of material object discourse sketched in chapter 2 is correct. A material object proposition, construed non-realistically, could then be said, in the normal sense, to be an 'accurate' or 'exact' representation of the objective state of affairs. Descartes' claim is far more substantial. An idea is a representation of a type adequate to the realist character of the world. One can infer from such a representation to 'the truth', not merely to 'the probability', of things. Evidently, a critic who attaches to the above question only its epistemological sense, viz. How can it be *known* that there are ideata corresponding to ideas? , would overlook these implications. For him the question arises simply because ideas are representational instruments which mediate between consciousness and its objects, and hence the issue of the objects' natures is irrelevant.

Armed with this result, and availing ourselves of a curious phrase which appears in many classical texts, we can frame a very neat formulation of the essence of ideational representation. Consider Spinoza's dismissal of our standard conception of the world as a plurality of discrete substances on the grounds that it is the product of our conceiving the world 'in the abstract and superficially, as we imagine it; [rather than] as substance, as we conceive it solely by the intellect' (*Ethics*1P15N). The standard conception is mistaken, in other words, because it results from our cognising the world otherwise than 'from th[e] point of view of substance' (ibid.). The *prima facie* oddity is glaring. If there is a 'point of view', must it not be that of the experiencing subject? Only a subject takes up a viewpoint *vis-à-vis* an object cognised. So Spinoza is preferentially counterposing what is not really a point of view at all, viz. the point

of view of the object cognised — of substance — to what the phrase ‘point of view’ normally denotes. A similar usage can be found in Descartes, e.g. at Rule 12/40. Neatly then, *ideational representation is representation from the point of view of substance*. Obviously, such a mode of representation is one which eliminates the V-parameter. It is a mode in which the cognising subject is brought into co-incidence, in respect of the representative content of his consciousness, with the object cognised.

The shift from epistemological to ontologico-semantic terms will enable us to achieve much needed resolution concerning the reasoning underlying Descartes’ contention that the condition of the probable knower is rationally insupportable. Since the ontology here cannot fully be understood independently of the semantics, the present ontological chapter awaits the semantic materials of the next for essential complementation. The impulse for shifting to ontology is imparted by the thesis, attributed in past pages to Descartes, that the notion of an idea, construed in a strict fashion, isn’t indifferent with respect to the character of the objects represented. It follows that non-ideational representata differ from ideata proper. The relation between the probable and the certain will be illuminated by an account of the ontological difference.

Assuming that ideas and substances are correlative, it may seem that extended enquiry into the relation can be abridged. If ideata are substantial entities, and if, in light of the contrast between ideas and non-ideational instruments of representation, the objects of the latter aren’t substances, doesn’t it follow that the relation between the two is the relation of substances to nonsubstances?

To rest with such a description would be unsatisfactory for three reasons at least. First, to say of an item that it is non-substantial is to say what it is not; but we want to know what the world comprises as represented by the probable cogniser, not merely what it fails to comprise. Second, saying that the probable subject represents the world as containing non-substantial items has no power to explain why Descartes thinks him rationally remiss. Third, and most important, to begin with the correlation between ideas and substances is to reverse the proper order. Descartes’ stress on the

certain or scientific conception of things notwithstanding, the probable or uncertain conception, warts and all, is closer to our ken, 'I am in a sense something intermediate between God and nought I find myself subject to an infinitude of imperfections' (Meditation 4/172-3). Neither the wax-experiment, which is after all only a monogram of adequate cognition, nor the metaphorical description of adequate cognition as being 'from the viewpoint of substance', supplies full literal content to the former. The significance of the explanatory shortfall here for the interpretation of Descartes' position can scarcely be overestimated, and it will now get a bit of the independent consideration it needs. Some of the complexities of the discussion to follow, which might otherwise strike the reader as excessive and contrived, not to say perverse, will be prepared for in this way.

4. *Referring the probable to the certain*

No matter how hotly interpreters of the Cartesian position contest with each other on points of detail, all will agree that there is some sense in which, according to Descartes, the probable knower is representing the self-same reality as the cogniser who has won through to certain knowledge. But there is more than one way of construing this *reference of the probable to the certain*. On an *immanent* construal of the reference, it would be argued that the probable cogniser's world-representation is marred by an internal flaw, and hence that he is capable of appreciating, on the basis of careful reflexive examination, that he is under an obligation to try to do better. In other words, even prior to the probable cogniser's being in a position to say what it (really) is that he is representing (only) in a probable manner, he can already determine that his conception of things is imperfect, and hence recognise that he must make a further effort.

The immanent construal is bound to suggest itself first to the uncommitted reader. But our reconstruction of the negative argumentation of Meditation 1 shows it to be an option closed to Descartes. In the course of that reconstruction it emerged that a sense-

based or probable mode of cognition is evaluated as inadequate by Descartes not primarily because it results in an inadequate representation of the (real) nature of things, but rather because it supplies a view of things as knowable probably, i.e. a view of knowledge as an affair of intrinsic probability. Indeed, we saw that the critique of the senses would succumb to low-level charges of logical invalidity were it resistant to reformulation in terms of intrinsic probability. And from the fact that the negative thesis must therefore be formulable without reference to the notion of certainty, it follows that no immanent treatment of the condition of the probable cogniser could effectively establish that he is obliged to work towards certainty.

So the manifest form of Descartes' treatment of the reference of the probable to the certain is pervasively misleading, since the immanent construal is suggested by the various phrases he employs in rough synonymy with 'probable conception'. An adjective like 'fragmentary' immediately points beyond itself to that which discharges the fragmentariness; 'vulgar conception' seems naturally to invite gloss as 'conception which vulgarises something else', and 'inexact or imperfect conception' as 'conception of something not itself marred by inexactitude or imperfection'. Each of the phrases appears *ab initio* to refer the content of a probable conception of things to a conception which is certain. In freely employing them Descartes thus creates the impression that the probable knower, qua vulgariser, imperfect conceiver, etc., can, by isolated self-examination or immanently, recognise the flawed nature of his domestic condition.

Descartes undeniably exploits the natural associations of the listed phrases in aid of his dissatisfaction with the probable. This exploitation, to the degree that it is theoretically irremovable, jeopardises the Cartesian project at its very first stage. True enough, probability and certainty normally stand to each other as counterparts: 'probability', as one philosopher puts it, 'is an approximation to certainty'.⁵ But the reciprocity holds only for the

5. Kant, *Logic*/89.

truth-neutral notion of probability, while Descartes' negative reasoning about the senses operates with the truth-involving notion. No matter how critically irresistible it may sound to state that the beliefs of the sense-reliant cogniser are *only* probable, or are *no more than* probable, these statements lack immediate critical force. Because truth-involving probability differs from, without being a direct counterpart of, Cartesian certainty, the operative content of each statement is its descriptive content.

It follows that Descartes' criticism of the condition of the probable knower must be *transcendent* in character, not immanent.⁶ To illustrate the relation between probability and certainty in the Cartesian system, we can avail ourselves of an analogy used above. The condition of the probable knower may be likened to that of a subject who owns a table rather than a chair. Just as incanting 'A table is not a chair' in his ear will in no obvious way impel him to try to replace the item of furniture he possesses by the one he does not have, so apprising the probable cogniser of the difference between his conception of things and the certain conception will not effectively move him to strive for a change in his condition. It would be an entirely different matter if the table owned by the probable cogniser's analogue were flawed, e.g. if it were missing a leg. To indicate to him that the table he possesses could not serve his purposes would, we may anticipate, prompt him to act. But despite Descartes' use of phrases like 'imperfect conception' in describing the probable knower — a use which suggests an analogous internal flaw in what he possesses — it is the former parallel, not the latter, which more accurately reflects the real state of affairs.

Despite having made disappointingly little progress towards determining how the probable comes to be referred by Descartes to the certain, we do have a negative result in hand. Should the texts support no answer other than 'Immanently', the Cartesian position will go to the wall. On an immanent construal of the reference,

6. It is transcendent from the viewpoint of the probable cogniser. It does not follow that Descartes' criticism is transcendent *simpliciter*, as was suggested by the 'unrelenting critic' of section 1, though this may be true too.

'probable' must be understood truth-neutrally. But the success of Descartes' critique of the senses requires 'probable' consistently to be taken in its truth-involving meaning. So if Descartes believed the reference to be immanent, he would have to be trading on the ambiguity of 'probable' incompatibly with the correctness of the belief.

The shift to ontological and thence to semantic terms of discussion is designed to show that the immanent route is not travelled by Descartes. This will confirm that the quick statement of the ontological relation between the probable and the certain adumbrated at the close of the preceding section is interpretationally unviable. If the immanent route is avoided by Descartes, a basic description of the ontology of probable cognition will not make essential reference to the (different) ontology of adequate or certain cognition. It will in other words be possible to spell out the ontology of the probable without making mention of the ontological content of the certain conception of things — and this is precisely what the quick statement fails to do. Having already indicated that the surface form of Descartes' discussion is often misleading here, my task is to spell it out for him, though it is only charitable to say that his words do on occasion point in the right direction. Witness the claim from Discourse 2 that in the course of methodical self-examination 'opinions' initially held will 'be replaced, either by others which were better, or by the same, when I had made them conform to the uniformity of a rational scheme'(/89).

5. Non-ideational representations and non-ideata

A subject who has attained to Cartesian certainty is a subject who represents the world by means of ideas: instruments of representation from which inference can safely be made to 'the truth of outside matters'. By establishing the precise difference between ideas and the representative instruments used by the probable cogniser, we are to settle the relations between the probable and the certain.

The claim that the probable cannot be referred to the certain on

immanent grounds implies the following ontological thesis: the objects of probable conception are not the objects conceived by the subject who has won through to Cartesian certainty. From the description of a subject's beliefs as 'probable' in the truth-involving sense it can be inferred that the objects on which these beliefs bear are of a distinctive kind — 'probable objects' we might say.⁷

Those who read Descartes' referral of the probable to the certain immanently are bound to raise a storm of protest. We can clarify the preceding point to advantage by airing their objection. Specifically, they will complain that arguing from the probability to a sense-based cogniser's beliefs to an ontological distinction between the objects on which these beliefs bear and the objects about which the Cartesian scientist holds beliefs is like arguing from the fact that a picture of a bathing beauty is blurred to the conclusion that the bathing beauty is herself blurred, and hence is distinct from any bathing beauty pictured by a sharply defined photographic representation. 'Obviously', the protestor insists, 'it isn't the object represented, only the representation of it, that is blurred; *mutatis mutandis*, the probability of a cogniser's conception of things doesn't bear on the identity of the objects conceived'.

Incontestably, transposing 'blurred' from 'blurred picture of a bathing beauty' to 'picture of a blurred bathing beauty' is an error. But the similarity in meaning between 'blurred' and terms like 'confused' and 'indistinct', which belong to the same family as 'probable', is only skin deep; so once the *mutanda* are *mutata* the protest's cogency is undermined. Two facts are especially pertinent here. Our reconstruction of Descartes' sense-critique by means of the notion of intrinsic probability indicates that calling a proposition about the world intrinsically probable is making a comment about the proposition believed, not (merely) characterising the belief

7. There is a logical gap between claiming that the objects of certain knowledge are not conceived by the probable cogniser and claiming that the probable cogniser conceives objects of a different kind. The first claim can be true, the second false, if the probable cogniser doesn't conceive any objects. It would be a trifle pedantic to worry about the gap just now, though I will address it below.

reposed in it by the subject. Also, some among Descartes' synonyms for 'probable' have associations different from those attaching as a matter of course to 'confused', 'indistinct', and to a term like 'blurred'. The blurredness of a picture can only jokingly be taken as a reflection of what is pictured. But it is quite possible that when a representation is described as 'incomplete' or 'fragmentary' it is so described exactly because what it represents is incomplete or fragmentary. When I say that a photograph of a building site gives an incomplete picture of the project I do not mean that some of the buildings physically present on the site have been cropped. My description thus bears on what is represented by the picture, not (only) on the picture thereof. Similarly, saying of a photograph of a table minus a leg that it is incomplete might well amount to saying something about the object.

If the adjective 'incomplete' functioned in Descartes' hands as does 'blurred' in 'blurred picture', the immanent character of the Cartesian referral of the probable to the certain would follow. A subject made aware that his representation is blurred already knows that he must do better. (A subject who couldn't be made aware of this would place himself beyond the pale of intelligent discourse.) May we conclude that the example of the picture of the table minus a leg illustrates the sense in which a representation counts for Descartes as incomplete? This would swing the pendulum too far in the other direction. It is true that the description of the mentioned picture as incomplete lacks immanent critical force — and so resists the preceding protest. But the gain here seems to be purchased only at the exorbitant cost of giving up all distinction between the way an incomplete representation represents and the way representation is achieved by one whose conception of the world is complete. What difference is there, *qua* picture, between a picture of a table missing a leg and a picture of a table with all its legs intact? If what the latter pictures were to be referred to a dining room suite, wouldn't it too qualify as incomplete? The problem is clear. The kind of incompleteness illustrated by the case of the table in no way attaches to the picture because of how it pictures — because of the kind of picture it is. So were this construal of 'incomplete' right, the condition of the probable knower would be

distinguishable from that of the Cartesian scientist only in the matter of scope or range: an impossible result by anyone's lights.

These complementary failures indicate that we require an interpretation of Descartes' term 'incomplete', as it functions in the course of his critique of the senses, which satisfies the following double-barrelled condition. The term must apply to a representation not merely because it applies, for independent reasons, to the item represented. (The example of the table violates the requirement, while the example of the blurred picture satisfies it only in the Pickwickian sense that the term 'incomplete' doesn't apply at all to the item represented.) It must in other words be the case that the representation has got to qualify as incomplete because of the kind of representation it is — because of its semantic character. Also, the term 'incomplete' must apply to the object represented because it applies to the representation of it. (Here, though in different ways, both examples fall short.) We might add a further condition which an interpretation can optimally be asked, without being strictly obliged, to meet, viz. power to explain why Descartes should have been so inclined to regard the incompleteness of a representation as an internal flaw in the condition of the cognising subject who employs it, and who hasn't (yet) won through to certainty. Since Descartes' actual failure fully to resist the inclination attests to a measure of confusion on his part, this condition, if satisfied, will be satisfied differently from the other two, i.e. by showing how one who is committed to an interpretation satisfying the pair could nevertheless have misconceived its character.

6. *'Incomplete ideas': the mereological relation*

For Descartes, saying that a subject's representation is incomplete is equivalent to saying that its representative content is a function of the subject's point of view. The incompleteness of a subject's representation under these conditions — it is bound up with the 'R = V(o)' schema — is in Descartes' view irrevocable. By polar contrast, saying that a subject possesses an idea, in the official meaning of 'idea',

is equivalent to saying that the representative content of his state of consciousness is free of V-effects. Ideas aren't disfigured by the preceding kind of incompleteness.

To assist in pinning down the exact sense of 'incomplete' as it figures in Descartes' critique of perceptual cognition — henceforth I will refer to this as *the technical sense* of the term — it is useful, in the absence of direct Cartesian guidance, to consider an implication thrown out when the contrasting claims above are conjoined. If the ascription of the claims to Descartes is correct, then should he ever use a phrase synonymous with 'incomplete idea', with 'idea' functioning officially, it follows that 'incomplete' in this usage couldn't have its technical meaning: ideational representations are in principle unaffected by the V-parameter, while the technical incompleteness of non-ideational representations is expressly due to the factor. On several occasions Descartes does employ 'incomplete idea' in the mentioned fashion. By seeing that 'incomplete' in these appearances is indeed non-synonymous with the term Descartes ascribes to the representations of the sense-based cogniser, the above claims will be confirmed and progress will be made towards explaining the term's technical sense.

In *Replies* 1, immediately after describing our normal 'image' of a thousand-sided polygon as 'confused' (/17), Descartes adds that we can have a 'clear and distinct ... image of a chiliagon ... if it takes in only one or two of the figure's sides' (/18). The application of the adjectives 'clear' and 'distinct' to a representative instrument indicates that the latter is an idea. (The conclusion is borne out also by Descartes' phrase 'act of vision' (/ibid.). As shall be shown in detail in VIII.4, 'vision' and 'idea' belong to the same family.) So notwithstanding Descartes' use of the word 'image', which often is counterposed to 'idea', he is here in effect characterising an ideational instrument of representation as incomplete. Because it takes in only 'one or two' of the thousand-sided figure's sides, the 'act of vision' gives no more than an incomplete representation of the polygon.

'Incomplete', as employed here, obviously has a highly attenuated sense. The 'image' described is not incomplete in any constitutional way, but only counts as incomplete — so Descartes informs us —

because it is referred to the chiliagon. Should the image be recharacterised as an image of, say, an open two-sided figure which either happens also to mark part of the boundary of an actual chiliagon, or can be made into such a boundary by further construction, then it would qualify for adjusted description as 'complete'.

The question is apt to arise: why should the image described as 'clear and distinct' have been referred in the first place to the thousand-sided polygon, rather than (only) to the two-sided open figure? Fortunately, the question need not detain us. No matter how it might be answered, the desired result would remain intact, viz. the result that in the gloss on the passage quoted 'incomplete' cannot be functioning in Descartes' technical sense. If this is not immediately clear, it can be made clear by a simple *reductio*. Suppose that the term does function in the gloss precisely as it functions when Descartes describes a sense-perceiver's grasp of things as 'incomplete'. The upshot would be that the attributed flaw in the latter's condition could be wiped clean away merely by altering the reference of his representation. All the rigours of Descartes' actual argumentation in denigration of a sense-perceptual mode of cognition would thereby be rendered otiose.

We are entitled to conclude that 'incomplete' doesn't have its technical sense here. Before explaining the term's exact purport, it is worth remarking that the case Descartes describes in *Replies 1* matches the case of the table produced above in essential respects. I pointed out that 'incomplete', applied to the picture of the legless table, cannot be synonymous with the term Descartes employs during his critique of perceptual experience. The same claim is being advanced here again, as the following passage confirms. In *Replies 4* Descartes considers 'the fact that certain substances are popularly called *incomplete substances*' (/99). He explains that the phrase is acceptable only when construable as per the following type of case: 'the hand is an incomplete substance, when taken in relation with the body, of which it is a part; but, regarded alone, it is a complete substance. Quite in the same way mind and body are incomplete

substances viewed in relation to the man who is the unity which together they form; but, taken alone, they are complete' (/ibid.).

These lines appreciably enhance our understanding of the example of the geometrical image. Descartes is insisting that the only sense in which a genuine ideatum can be styled 'incomplete' is a weak and uninteresting one. (This isn't to deny that a reader could find the anemic sense of the term interesting; only to contrast it with the sense attaching to the term as applied in the context of a criticism of perceptual cognition.) So by determining the precise meaning of 'incomplete' here insight will be gained into what its homonym, applied to the representations of the cognising subject who falls short of certainty, purports.

The examples indicate that the term 'incomplete', as it contributes to the phrase 'incomplete idea', has a *mereological* sense. Very roughly, two objects are mereologically related when one is a proper part of the other. Paradigmatic would be the case of a brick and a wall when the brick is one of many which compose the wall. Accordingly, to say that an idea is incomplete is to say that its ideatum is a proper part of a substantial item.

Formally, the examples of ideational incompleteness adduced above — those extracted from Descartes' texts as well as the ones framed by me — match the mereological paradigm. Each of the representations characterised as incomplete — the picture of the three-legged surface, the image of the two-sided open figure — represents a proper part of a wider whole. The picture represents a proper part of a fully constituted table; the image, a separable boundary portion of a fully constituted chiliagon. As for the example of the hand, where Descartes speaks of objects represented rather than representations, the mentioned item is one limb of a human body: a proper corporeal member.

The examples suggest the following two conditions to be jointly sufficient for ideational incompleteness. First, *qua* idea, i.e. *qua* 'clear and distinct' representation, the idea described as incomplete must have for its object an individual capable of standing on its own: a substantial entity. Second, that to which this ideatum is referred,

when the idea is described as incomplete, must be a more extensive substantial whole: a composite substance.

The hope is that the preceding elucidation of ideational incompleteness will illuminate the technical sense of 'incomplete' — the sense in which 'incomplete' links up with the ' $R = V(o)$ ' schema, and in which the term applies to the representations of the perceptual cogniser. To assure that we are on target it is therefore important to banish all doubt that ideational incompleteness, as Descartes understands it, is *unlinked* with the schema. This is accomplished without difficulty. In each of the cases treated it would readily be acknowledged that the incompleteness of the ideas so characterised is explicable 'from the point of view of the object'. The compositeness of the objects — their being wholes made up of a number of integral parts — has nothing whatever to do with the subject's viewpoint. And so R is not in these cases a function of V .

The complex condition specified two paragraphs ago for ideational incompleteness, a sufficient condition, is too restrictive to cater for everything Descartes has to say here. Common to each of his claims is first, that the incompleteness in question is presented as mereological in character, and second, that the whole is itself an ideatum. But these essential, i.e. necessary, features may be in force even where the item characterised as 'a whole' is not substantially composite, and therefore may obtain even where the complex sufficient condition does not. Some item A may be a proper part of another item B even where A is less than a substantial entity in its own right. Providing the remainder given by ' B minus A ' does not go beyond B , will not A be such a part? To do justice to all that Descartes says here, we must consequently generalise the condition for ideational incompleteness to read: a representation is ideationally incomplete if its representatum is a proper part of a more comprehensive ideatum. (Henceforth, I will refer to the notion of incompleteness connected with the restrictive condition as *the special notion*, and to the homonymous notion connected with the non-restrictive condition as *the general notion*.)

In sum, ideational incompleteness is mereological in character for Descartes. If any residual doubts remain, they should effectively be

quelled by citing another passage where the phrase 'incomplete substance' appears. Descartes informs us that one who asserts of specific substances that they are incomplete 'merely asserts that they are incomplete in so far as they are referred to some other substance, in unison with which they form a single [hence a composite] self-subsistent thing' (*Replies* 4/99). '[A] man's arm', he adds a bit further on, '[is] a substance really distinct from the rest of his body' (*ibid.*/102), i.e. a substance in its own right.

Prior to addressing the technical notion of incompleteness, it is important to observe that the preceding discussion of and results concerning ideational incompleteness are utterly uninformative on the nature of ideation as a distinctive mode of representation. The words 'a representation whose object is a proper part of an item which is itself an *ideatum* is ideationally incomplete' can be understood fully only by one who knows independently what ideational representation is. Nothing in the formal notion of a mereological relation implies that if one representatum is a proper part of another, then the representations are ideational. Nor is it appreciably more informative to say that a representation is ideationally incomplete if it represents a proper part of a substantial entity, since we have yet to be told what makes the representation of the substance ideational. So a theorist who specifies conditions for ideational incompleteness of the above kind would be mistaken if he himself believes, and misleading if he expects us to believe, that a criterion for separating the ideational gold from the non-ideational slag has thereby been supplied. The significance of this lacuna — which indeed influences all the Cartesian texts appealed to — will not be long in emerging.

7. *Non-ideational ontology: bipolarity and aspectuality*

Descartes countenances one type of incompleteness, and one type alone, in the ideational context. The only type of incompleteness which can figure in the properly scientific or 'certain' conception of things is mereological in character. Expressed in terms of the special

account of mereological incompleteness, this means that only items which are themselves complete — substances which ‘in so far as they are substances, ... have no lack of completeness’ (*Replies* 4/99) — can be incomplete ideata: an incomplete ideatum must be a substantial component of a substantial composite. Expressed in terms of the general account, it means that only items which are proper parts of ideata can be incomplete ideata. The general account is thus more liberal than the special in allowing non-substantial components of substantial items to qualify as candidates for the status of incomplete ideata.

What are non-substantial components of substantial items? Cartesian ontology supplies the clear answer: modes of substance. But if modes are candidate incomplete ideata, doesn’t it follow that they are candidate ideata? Didn’t I state in section 2, however, that Descartes denies the possibility of ideas of modes?

Though there is no inconsistency here, the tension is real enough, and I will eventually argue that it is a focus of severe difficulty for Descartes. As for the appearance of inconsistency, it can be banished as follows. Note that the apparent conflict arises because of the extension of the account of mereological incompleteness from special to general. But the two accounts are not on a par.⁸ Modal ideata are incomplete in a vastly stronger sense than substantial components of substantial composites. Descartes was quoted to say that a subject cannot have an idea of a mode without *ipso facto* ideating the substance of which it is a mode. So, in a clear sense, modal ideata are constitutionally incomplete. This is quite untrue of substantial items which happen to be incomplete ideata. Obviously, Descartes’ dualist argumentation obliges him vigorously to affirm its untruth.

Equipped with the result that ideational incompleteness differs from incompleteness of the kind Descartes ascribes to the world-representations of the sense-perceptual cogniser, we can therefore conclude that the latter, whatever it may be in full, deviates from the

8. The ‘severe difficulty’ alluded to just above can be described preliminarily as follows. While one would expect a special account of something to be subordinated to a general account thereof, it emerges that Descartes’ general account of mereological ideational incompleteness is subordinated to the special account.

mereological pattern. The Cartesian claim that non-ideational representations are constitutionally incomplete thus implies the following: *non-ideational representations do not represent items which relate mereologically to ideata.*

This isn't quite the ontological result we have been striving for; nor is it expressed in the proper form. A representation can fail to represent an item which is related mereologically to an ideatum by failing to represent anything at all. But it is a simple matter suitably to reformulate the implication. *The Cartesian probable cogniser* — he who represents the world non-ideationally or by means of representative instruments which are technically incomplete — *represents the world as comprising items which are not related mereologically to ideata.*

It is simple to reformulate the implication. But it remains to establish that the frankly ontological recasting actually captures a Cartesian thought. For this purpose it is necessary to come up with a type of entity to which Descartes' texts can be shown to generate a commitment and such that any entity of this type fails to bear a mereological relation to an ideatum proper. By doing so, the implication will also be given a proper form, i.e. a form in which the specification of the content of a non-ideational conception of things does not make reference to the content of the scientific or ideational conception.

A term used by one of Descartes' critics can be pressed into service here. Gassendi glosses Descartes' distinction between the completeness or perfection of scientific cognition and the incompleteness or imperfection of mundane cognitive commerce with the world as follows: '*you will be said to possess a perfect idea of a man, if you have surveyed him attentively and frequently and in many aspects; while the idea of him whom you have but seen in passing and on one occasion, and partially only, will certainly be imperfect*' (Objections 5/157). 'Aspect', I suggest, classifies entities of the type we are seeking.

Even apart from Gassendi's testimony, the appropriateness of 'aspect' can be appreciated. If we take seriously the claim that R is influenced by V, it seems clear that the content of R will be aspectual

vis-à-vis o: when the cognising subject stands in a selective relation to his object, no more than an aspect of the latter's character is 'projected' into his consciousness. So the word could have been judged consonant with the spirit of Descartes' critique of the senses even had the texts failed to contain it, since Descartes' dissatisfaction with this mode of cognition comes down precisely to the fact that one who so cognises stands in a distortively selective relation to the object. But though we might have hit upon 'aspect' as the *mot juste* without Gassendi's nudge, it is useful, with an eye on subsequent developments, to take our cue from *Objections* 5. Below we shall see that Gassendi's underlying conception of representation is situated throughout on the 'probable' side of the great divide between probability and certainty. Note how Gassendi's paraphrase relativises the distinction between 'perfect' and 'imperfect'. Speaking of the difference between an idea which is adequate and one which isn't, he says of the former that it '*has these qualities [of truth and conformity with the object] in a greater degree than the other*' (ibid./156). But certainty and probability do not fall on a sliding scale for Descartes. So Gassendi's understanding of the distinction is quite radically unCartesian. The aspectuality of a representation is not in effect counterposed by Gassendi to the non-aspectuality of the object represented. Of course, it is apt to seem that Gassendi crudely begs the question here; for he models the distinction between adequacy and inadequacy — between perfection and imperfection — in the arena of sense-perception. Thus, interpreting Descartes' claim that the wax-experiment supplies a 'clear and distinct' representation of the wax's character, he writes that '*clear and distinct knowledge ... is a survey effected by the senses, of all ... the accidents and mutations which the wax can sustain*' (ibid./148). However, whether he knows it or not Gassendi is in fact making a principled point of great consequence, which effectively shifts the burden of proof to Descartes. In due course, we shall therefore have occasion to return to Gassendi for further guidance concerning the difficulties of Descartes's referral of the probable to the certain.

Though the vagueness of the interpretative proposal will be removed only when the semantics of aspectual representation are

detailed, some oblique steps can be taken here to bear out the proposal's gross accuracy.

Consider first that intuitively appealing protest aired early on against the thesis that Descartes's probable/certain distinction has ontological implications. Arguing that the probable cogniser experiences objects of a distinctive kind — it was objected — is no different from arguing that a subject whose picture of an object is blurred possesses a picture of a blurred object. While the point would be unanswerable were the cases identical, it is possible to see that the protest doesn't pack the same punch for 'aspectual representation' as it does for 'blurred picture'. I agree that the synonymy of the Cartesian phrase 'incomplete representation' with 'aspectual representation' doesn't by itself sustain the ontological formulation of the probable/certain contrast; but it couldn't convincingly be argued that the formulation fails *because* 'aspectual object' is as unpalatable as 'blurred object'. By all accounts, literal blurredness isn't a characteristic of an object portrayed as distinct from the portrayal of it. The same cannot be said — certainly not with the same degree of advance confidence that it will be accepted — about aspectuality. We do speak of the aspects of an object. So the ontological formulation cannot fairly be written off by recycling the protest.

A second step in defense of the ontological proposal consists in showing that it supplies answers of the right kind for two questions which it should answer, assuming its synchronisation with Descartes' thinking. How do aspects (i.e. aspectual objects) fail to be related mereologically to genuine ideata? How is this failure one of principle? Satisfactory answers are implicit in what may appropriately be called *the bipolar relationality* of aspects. Not only is an aspect *of an object*, it is also *for a subject*. In other words, an aspect isn't of an object *tout court*; it is of an object for a subject. For this reason no aspect can be completed into an object of which it is an aspect, whether physically (as a table minus a leg can be completed into a well-constituted table by adding that part), or by some more subtle mental carpentry (as a proper part of a substantial item which isn't itself substantial can be

completed into a substance⁹). It follows that the relation between aspects of objects and objects whose aspects they are isn't of the mereological type Descartes countenances for ideational representation. Items A and B relate mereologically when what 'B minus A' specifies is less than B; when what it specifies doesn't exceed B. Because an aspect is essentially determined by a factor extraneous to the object whose aspect it is, this condition cannot in principle be met.

8. *Confirming the analysis*

Remarks Descartes makes in the course of his critique of the senses partially reinforce the suggestion; and the partiality of the reinforcement they supply, rather than casting doubt on the suggestion's merit, actually sheds light on why Descartes fails explicitly to draw the ontological conclusion.

Consider the assertion that 'colossal statues raised on the summit of ... towers, appeared as quite tiny ... when viewed from the bottom' (Meditation 6/189). (This theme recurs in many forms. Another example from the same text: 'a star makes no larger an impression on my eye than the flame of a little candle' (/193). And the example is used elsewhere in the *corpus*: 'the stars ... never appear to us as large as they really are' (*The Search After Truth*/313).) To describe the statue as 'tiny' is not to describe it as it is in itself; it is to specify a relational feature of the statue — a feature of it qua 'viewed [by a sense-perceiver] from the bottom'. The description of the statue as tiny could be characterised without undue strain as aspectual in nature: it is a description, *inter alia* though essentially, for a subject. In abstraction from the subject's position *vis-à-vis* the statue, the description would resist construal. And note that Descartes' own word here, 'appears', carries implications roughly similar to those borne by 'aspects': how an object appears is determined, *inter alia* though essentially, by factors belonging not only to the object pole

9. This is called 'concretion' by N. Goodman in *The Structure of Appearance*.

(in this case the object's size) but also to subjective factors (here the subject's size and distance from the object).

For a reason to be addressed in a moment, Descartes' claims do not point unequivocally in the ontological direction we are moving. Nevertheless, they do link up with the notion of technical incompleteness. In advancing the quoted claim, Descartes intends to cast doubt on the adequacy of a sense-based conception of reality. (Compare the parenthesised line above from *The Search After Truth* with the general point in the *Principles* that '*the perceptions of the senses do not teach us what is really in things*' (2.3/255).) Clearly, the coherence of a use of the adjective 'tiny' involves bipolarity. Now the term which immediately contrasts with 'bipolar' is 'monopolar'. Just so, it is wholly natural to characterise the kind of incompleteness Descartes countenances in the ideational frame as monopolar. When the incompleteness of an item A is ideational, it is explicable without reference to anything other than a wider item B of which A is a proper part. Since, by contrast, the root intelligibility of the attribution of incompleteness to a determination like 'tiny' is essentially a function of the relation between the object to which the determination applies and the subject who applies it, the incompleteness attributed here is not ideational.

Plainly, the interrelated notions of bipolarity, aspectuality, and non-ideational incompleteness are relevant to analysing the cases described by Descartes. However, their relevance appears to be secured in a manner which does not implicate the ontological proposal, viz. that when 'incomplete' has its technical sense, a Cartesian 'incomplete representation' is the representation of an item of a distinctive kind. To say that the determination 'tiny', qua applied to the statue, is aspectual — it is, for instance, bound up inextricably with a bipolar nexus; in abstraction from this nexus it resists construal — is certainly not to deny that the statue is being described. So the unproblematic aspectuality of the determination implies nothing about the item to which it is applied.

I indicated at the outset that the quoted remarks would not reinforce the ontological proposal quite in the desired way. But I added that the weakness of the reinforcement actually marks a flaw in

Descartes' own presentation, and only tells against the proposal by casting a suspicion on the viability of the Cartesian programme. Without underestimating the complexities of the case, I believe that the 'important observation' of section 6 above provides a key for quickly unlocking the point. I observed that throughout the explication of ideational incompleteness, an understanding of the nature of ideational representation is presupposed.

To extract the significance of the fact in a forward-looking way, let me hark back even farther. A related claim made early in the chapter indicates how the point should be generalised. I said that an unrelenting critic of Descartes' strictures against probable knowledge might express himself by pointing out that whatever Descartes may lead us to believe — whatever he may himself believe for that matter — the o-component of the ' $R = V(o)$ ' schema is understood throughout only within the frame of the schema as a whole.

With this unyielding criticism in view, reconsider the putative shortcoming of the preceding result. It was proposed in an ontological register that the technical incompleteness or aspectuality of a representation implies that the item represented thereby is itself aspectual in nature. But while it can be agreed that 'tiny' figures in Descartes' examples as an aspectual determination, and hence can be granted that saying of a statue that it is tiny is specifying an aspectual determination of it, this (it is claimed) supplies no basis for inferring that the item represented aspectually, viz. the statue, is itself an aspectual object. All that we have here is a contrast between an aspectual determination and an object to which the determination is applied, and from the aspectuality of the former nothing follows about the ontological standing of the latter.

So far as it goes, the point cannot be gainsaid. But it does not go far enough. (And, I am suggesting, neither does Descartes' example, on its most natural construal, go far enough.) The thrust of Descartes' description — unfortunately a lot easier to state than to understand — is not that the aspectuality of 'tiny' implies an aspectuality in the statue, but that the aspectuality of 'tiny' might be matched by that of 'statue' as well.

In advance of impending semantic developments, I can do little

more at the present juncture than offer some hopefully persuasive remarks to incline the reader to take the preceding statement seriously, its admitted obscurity notwithstanding.

In his formulation of the statue-example Descartes appears to be gesturing towards such a generalisation. He objects to the determination 'tiny' because the item described by the adjective is intelligibly so described only 'from below', and hence the term doesn't tell us 'what is really in' the item. But the adjective Descartes substitutes for 'tiny', viz. 'colossal' (Meditation 6/189), ostensibly one which does therefore reveal the item's real nature, *isn't different in logical character*. Given that Descartes himself substitutes one aspectual determination for a second, can't he be seen to be hinting that the terms normally regarded as contrasting strongly on the score of aspectuality may not really contrast so strongly as we tend to think?

It would be a trifle bold to insist on this. Descartes might after all have selected a pure size predicate like '50 feet high' for purposes of contrast without deflecting the central thrust of the passage. Nevertheless, the point is still at least instructive. Even had Descartes made that selection, the obligation would have remained on him to establish that the term chosen for contrast with 'tiny' is strongly different: he could not even then have allowed himself to take this for granted. And exactly the same is true of 'statue'. Consider the fact that though 'tiny' is a relational term, one of whose relata in the case described is the cognising subject, it functions syntactically in a non-relational fashion, in just the way '50 feet high' functions, and no differently than 'statue'. Though its relationality is readily exposed, it is nevertheless implicit. And the same relationality may affect, at a deeper level and hence in a fashion more resistant to speedy disclosure, those terms we would unreflectively tend to see as contrasting here with 'tiny'.

Descartes probably doesn't have all this before his eyes when he formulates the statue-example. But his overall position commits him to the generalisation framed. He of course believes some object-determinations to be non-aspectual. The contrast between 'tiny' and

'statue' can however only be advanced question-beggingly as more than a low-level illustration — a monogram or souvenir — of the literal contrast between aspectuality and non-aspectuality. It is incumbent on Descartes to prove, or at any rate to provide a firm sense to the idea of proving, that any given object-determination is non-aspectual, even therefore 'statue'. The very presence of the wax-experiment, designed to point towards what a non-aspectual (i.e. non-sense-perceptual) grasp of an object is like, should dispel all doubt about this. Had the statue-example itself been deemed to supply a literal exemplification of non-aspectuality, the experiment would have been unnecessary.

The conclusion rested on Descartes' remarks about the statue is more easily stated than understood. That the difficulty of comprehension reflects a difficulty internal to Descartes' thinking and isn't an artifact of over-interpretation is amply confirmed by reiterating that Descartes owes an account of ideational representation. The example of the statue is only a low-level illustration. Should Descartes agree that the distinction between a determination like 'tiny' and one like 'statue' exemplifies the official distinction between non-ideational and ideational representation, a stiff price would have to be exacted. It would follow that the various fallacies commonly charged against his critique of the senses actually are committed. Consider how, with reference to the analogue of the statue-example in *The Search After Truth*, it is Polyander, the commonsense thinker, not the Cartesian, Eudoxus, who states that the 'error' of describing a large object as small can be rectified without changing one's sense-perceptual position: 'all the[se] errors are easily known, and do not prevent my being now perfectly persuaded ... that all that my senses usually offer to me is true' (/313). Eudoxus cannot of course help admitting that non-veridical sense-perception is an occasional thing. But, to repeat a well-worn point, in order to avoid commitment to CP he is obliged to deny that the commonsense or 'positive' distinction aligns with the distinction between Cartesian certainty and Cartesian probability. The oblique tack Eudoxus takes in meeting Polyander's claim is an index of this, and its obliqueness at the same time indicates that the more direct response is being delayed

— a delay become eternal with Descartes' abandonment of the essay in an uncompleted state.

Once again then, we see that there is nothing adventurous in claiming that Descartes must defend the ontological thesis as a condition of establishing Cartesianism. The texts cited reveal a dim recognition of the commitment. It is my aim in the chapters following to show that Descartes' writings contain the materials pertinent to its defense. I might just add here that there are other texts from which Descartes' appreciation of the obligation can be extracted with less effort. In Meditation 6/192-4 for example, where explicitly non-monoplar object determinations like 'agreeable' and 'disagreeable' are mentioned, the moral of the statue-example is considerably extended. However, because I have been working throughout in a forward direction — attempting to make out the nature of probable cognition to be such that an ontological implication arises — it would be imprudent to rely too heavily on the later discussion, since Descartes is formulating his thoughts there on the assumption that the transition to certainty has been effected.

To conclude this portion of the treatment, it will be useful to proceed in the present loosely clarificatory rather than strictly exegetical spirit by enlisting the aid of several philosophers, three classical, one modern, to shed further light on the historical reality and character of the ontological thesis.

9. Classical and modern evidence

The epigrammatic description of ideational representation as representation 'from the point of view of substance' was prompted by a remark in Spinoza's *Ethics*. The remark is embedded in a passage having just the implication I wrested with such effort from Descartes' discussion of the statue. But in Spinoza's case the implication is delivered up on a silver platter.

Descartes' words were said to imply that what is true of a determination like 'tiny' might also be true of 'statue', though

obviously at a deeper level of analytic penetration. So the various positive distinctions between the two — ‘tiny’ is an adjective, ‘statue’ a noun; ‘tiny’ a relational term, ‘statue’ non-relational — are no accurate index of their position *vis-à-vis* the line between ideas and non-ideational representations. Spinoza’s claim in the passage alluded to is precisely that our conception of the world as comprising a multiplicity of discrete, finite, substances, e.g. statues, is metaphysically objectionable. A subject who so conceives the world conceives it ‘in the abstract and superficially’; he fails to conceive it ‘from th[e] point of view [of substance]’ (*Ethics* 1 P15N).

Whether Spinoza is right or wrong is immaterial here. The material facts, sufficient to establish the viability of Spinoza’s point in the Cartesian frame, are two. First, Spinoza’s explanation of the inadequacy of the mentioned conception links directly with his account of sense-based cognition. The phrase ‘abstractly and superficially’ functions in Spinoza’s hands much as does ‘unclearly and indistinctly’ in Descartes’. Second, Spinoza’s dissatisfaction with the workaday world-view is expressed, therefore, in the name of an ideational representation of things. From these facts it follows that even if Descartes does regard the representative content of ‘statue’ as ideational, he is bound by a solemn duty to prove this to be the case. Even if my reading of the statue-example is laboured, the conclusion is one that Descartes should have drawn himself.

A formal reason might be thought to exist for declining the suggestion about the aspectuality of ‘statue’, and it might therefore be denied that the suggestion should even conjecturally be attributed to Descartes. ‘Tiny’ is an adjectival determination; as such, when it applies, it applies to the designatum of some further term, e.g. ‘the statue’. Doesn’t it follow that a strong distinction must obtain between the two, strong enough to place them on opposite sides of the ideational/non-ideational line? It doesn’t follow. Descartes says: ‘I distinguish lines from surfaces, and points from lines, as modes from modes’ (Letter to [Mesland] of 2 May 1644/151). And Leibniz generalises the claim: ‘modes can be repeated to infinity, so that there can be qualities of qualities and numbers of numbers’ (*Preface to Nizolius*/126). From the applicability of a determination ‘Ø1’ to the

designatum of another determination 'Ø2', i.e. from the fact that 'Ø1' is ascribable to a Ø2, it cannot be inferred that the latter differs strongly in character from the former. Evidently, Spinoza would say precisely this, 'from the viewpoint of substance', about a singular claim such as 'The table is red': just as the predicate expresses a non-substantial determination, so does the subject. Once again, my suggestion about how Descartes ought to have taken the statue-example is sustained.

In initially specifying 'the official grammar' of 'idea' in section 3 above, I stated that qualifications would have to be made to the categorical claim that only substances can be ideata. These last points volunteer themselves in clarification of the statement. (I beg the reader to bear in mind, though, that the qualifications are necessary to cater for how Descartes actually uses the term 'idea'; I do not admit, in other words, that the qualified account, as opposed to the categorical one, should be regarded as expressing Descartes' considered position.)

The following difficulty arises for Spinoza. On his ontological assessment of a singular claim like 'The table is red', the designatum of the singular phrase is not a substance. Are tables then modes of substance? A moment's reflection reveals that a distinction is needed here between an item which is a monopolar dependency of substance, and one which is a bipolar dependency. The term 'tiny', as in Descartes' statue-example, gets its content both from the object to which it is applied and from the subject who applies it; as such, it expresses a bipolar, not a monopolar, determination. In Spinoza's ontological scheme the classificatory word 'mode' must be restricted to monopolar dependencies: bipolar dependencies (which I have dubbed 'aspectual') have no place. So even if tables are non-substantial items, Spinoza cannot conclude that they are modes unless he also shows that they are non-aspectual in nature. The same applies for Descartes.

Leibniz is the only one of the three rationalist patriarchs to get this explicitly right. (Just so, the ontological proposal that the objects of 'adequate' cognition differ from those of 'inadequate' cognition goes through most smoothly in the Leibnizean context, where

material objects are clearly stated to be objects of a radically different kind than monads.) Speaking of certain features which are central in our putatively basic factual descriptions of the world, Leibniz characterises them as features 'which thought supports but which nature does not know in their bare form' (Letter to De Volder of 20 June 1703/529). While these features are non-substantial, Leibniz doesn't conclude that they are (dependent) features of the world's substantial, monadic, components, since they are in part constituted by thought. Accordingly, because of their bipolar status, they will suffer elimination in the course of the transition to the metaphysically basic description of things, the essential burden of this journey being to sweep away features which are due to subjectivity.

Leibniz's implied distinction is precisely the distinction between monopolar dependencies or monadic features and bipolar dependencies or features which arise in part due to the nature of sense-perceptual cognition. Spinoza is not only committed to the same distinction, but he even makes it, though by contrast with Leibniz he isn't fully aware of what he is doing. Consider the passage quoted above from 1P15N. Having stated that the sham view of items like tables and chairs as ontologically basic is a function of our conceiving the world with the 'help' of the senses and the imagination, rather than by intellectual means alone, Spinoza denies, as therefore he ought, that the world as it really is comprises such items. Later, however, he states: 'We may ... conceive the whole of nature as one individual, whose parts [are] bodies' (2P13L7N). Here, finite bodies, among which tables and chairs are surely paradigms, are accorded positive status 'from the viewpoint of substance'. Plainly, a distinction which Spinoza fails to enunciate is needed. In the passage from Book 1 Spinoza is speaking of bipolar dependencies or aspects; the 'parts' of substance referred to in the Book 2 passage are monopolar dependencies or modes in the proper sense.

It is readily seen that only bipolar dependencies are bound up with the ' $R = V(o)$ ' schema. I have shown that Descartes makes the needed distinction here: the distinction between ideational incompleteness in the general but not special sense, and technical incompleteness. And so, Descartes is willing to allow that there may

be ideas of non-substances, providing these are incomplete in the former sense. But while the distinction is marked in Descartes' writings, it is vital not to underestimate the difficulty of applying it in the concrete. The preceding discussion of the statue-example was designed to demonstrate how severe the difficulty may be. I have no doubt that a major source of Descartes' self-misunderstanding on the transcendent character of the referral of the probable to the certain is his failure properly to address the difficulty.

This brings me to the third classical figure, Kant. It takes little effort to discern that the ontological proposal is taken by Kant for true. Kant classifies the world's constituents as 'appearances', a word, as already noted, which duplicates many of the logical features of 'aspect'. Though I am reserving detailed discussion of Kant for the final chapter, let me set down a few Kantian claims which put a 'QED' to the proposition that his thinking is in tune with the above results — and confirm their historical *bona fides*.

I argued that Descartes' treatment of the statue-example must not in strictness be taken to imply a contrast between the aspectuality of 'tiny' and the non-aspectuality of 'statue': his use of the distinction serves merely as a low-level souvenir of the official contrast. Kant makes the point explicitly.

We commonly distinguish in appearances that which is essentially inherent in their intuition and holds for sense in all human beings, from that which belongs to their intuition accidentally only, and is valid not in relation to sensibility in general but only in relation to a particular standpoint or to a peculiarity of structure in this or that sense. The former kind of knowledge is then declared to represent the object in itself, the latter its appearance only (A45/B62).

Just so, the 'tiny-ness' of the statue is relative to a particular standpoint, while the object's being a statue shows no comparable relativity.

But this distinction is merely empirical [W]e [must not] stop short at this point [W]e ought to treat the empirical intuition as itself mere appearance (ibid.).

Plainly, Kant's point is that the way the distinction between aspectuality and non-aspectuality, or between the bipolarity and the monopolarity of a determination, is marked in workaday thought

and speech (e.g. in Descartes' example naturally construed) is not necessarily a strictly proper marking of it.

For Kant, needless to stress, a proper marking of the distinction is transcendent of our normal ways of thinking and speaking — roughly in the fashion I have been arguing that Descartes' referral of the probable to the certain is transcendent of the former. But 'transcendent' in Kant's texts means 'transcendent *simpliciter*', not merely 'transcendent of how we normally think and talk'. 'The absolutely inward [nature] of matter, as it would have to be conceived by pure understanding, is nothing but a phantom' (A277/B333). Since by 'understanding purely' Kant intends 'ideating', the critical implications for Descartes are clear.

Lastly, it is worth alluding to the position of a contemporary philosopher in order to get a sense of the remoteness of Descartes' thinking from what passes nowadays as ontology. As P.F. Strawson tells the story in *Individuals* and elsewhere, our basic ontological commitments are to middle-sized physical objects. Note how a frankly aspectual term, 'middle-sized', is used to fix the basic ontological type. Evidently, there is ontology and there is ontology, and one has every right to anticipate that attempts to interpret and evaluate the Cartesian position from a broadly Strawsonian standpoint will be premised on a systematic *ignoratio elenchi*.

V The Semantics of Incompleteness

The deep fissure between the ontology of the probable and that of the certain conception of things is explored from a semantic perspective. A semantic thesis to which Descartes is committed, but which he fails to acknowledge and accommodate, is worked out: the instruments of representation of the 'probable' cogniser are 'unclear and indistinct' in a representative as opposed merely to an inherent, fashion. In scholastic jargon: the mentioned instruments are 'formally' unclear and indistinct, not merely 'objectively' so. It follows, as before, that the objects of probable cognition are objects of a distinctive kind. In a surprising turn of events, it emerges that reference and predication, as we know them, are semantic mechanisms of 'unclear and indistinct' cognition, and hence that referents, i.e. satisfiers of predicative contents, are banned from Cartesian science. The root problem for Descartes — viz. the problem of why a probable conception of things must be superseded by a certain conception — boils down to this: why must a conception of the world as comprising referents be replaced by a conception comprising substances?

1. *Why semantic clarification?*

'Representation' is a wider term in Cartesian writings than 'idea'. To qualify as an idea, a representation must be 'clear und distinct'. Descartes grants that the representative states of cognising subjects are not always clear and distinct: the millennium has not yet arrived. Otherwise, the negative portions of the *Meditations* could have been suppressed entirely, and its positive teachings codified in a kind of handbook for convinced Cartesians. The representative content of the sense-perceiver's consciousness differs therefore from that of the cogniser who has achieved Cartesian certainty. The latter's representations alone are ideas in the strict sense. 'Representation', in short, is a generic term denoting a class having for disjoint species ideas and representative states which are not clear and distinct.

Descartes' central concern is to refer the probable to the certain. Should he fail to secure the reference, the imperative addressed to the probable cogniser to seek for certainty could be disobeyed without

compromise to *his* rationality. What, exactly, is the nature of the rationality the possession of which by a subject exacts obeisance to the imperative? Two chapters back, it emerged that the operative notion of rationality is informed by a divine paradigm. In the last chapter, this re-emerged, cleansed of theology, in the claim that Descartes' referral of the probable to the certain is transcendent of the former. The imperative addressed to the probable cogniser must be read, in other words, as an imperative to the effect that he *replace* his non-ideational representations by means of ideas proper. This is the replacement of a picture of the world as containing objects of one type — 'aspectual objects' — by a picture of the world as containing objects of a different type — 'perfect, complete, objects': substances, and items related mereologically to them. Those who require that Descartes provide purely logical argumentation as a condition of successfully referring the probable to the certain are therefore demanding something that he does not supply. The project, again, is one of replacement. But 'purely logical reasoning' is possible only when no more than a nominal gap separates replacer and replaced. The aim of the present chapter is to clarify the character of the replacement in semantic terms.

Why *semantic* clarification? In what way does the (I believe) painstaking examination just concluded leave us in the lurch? Despite our pains we have really accomplished little beyond a partial mastery of the idiom of ideational representation. The results established — that ideata must be perfect objects, that non-ideational representata are related non-mereologically to such objects, that non-ideational representata are aspectual (rather than substantial) in nature — do little more for us than implicitly define the various Cartesian *termini technici* they embed. It is true that by informally construing 'perfect object' as '(Cartesian) substance' we have overpassed the implicitly defining force of these propositions. However, until we know what the *mechanisms* of ideational representation are, that force can alone in strictness be credited. It is easy to enumerate items which are classified by Descartes as substances. But perhaps Descartes' own classificatory decisions are indefensible. So we still must be told exactly why the enumerated objects are classified in this way. The

lacuna in our understanding here obviously leaves its mark on the ontological proposal. And so, because enlightenment is needed in the mechanisms of ideational representation, a broadly semantic project is in order.

The chapter heading signals the roundabout route to be travelled. Our mastery of the ideational idiom remains for the most part on the level of implicit definitions. Plainly, we are much better informed about inadequate, non-ideational cognition — being ourselves in the first instance inadequate cognisers. Sense-perceptual cognition is inadequate; and ‘sense-perception’ is a phrase to which a goodly measure of uncontroversial substantial content attaches for us. The contrast here emerges clearly if we consider the notions of ideational and non-ideational cognition extensionally. While all kinds of doubts assail us over whether the items explicitly classified by Descartes himself as ideata really qualify, it is perfectly clear which conditions of experience are sense-perceptual. In view of this difference, the proper course consists in attempting to determine the exact semantic mechanism of inadequate cognition without appealing to the extra-syntactic contrasts between bipolarity and monopolarity, between aspectuality and non-aspectuality. Some preparatory work along these lines has already been completed. Without essential reliance on either of these contrasts, it was established in the preceding chapter that the adjective ‘incomplete’ Descartes employs when describing an ideational representation differs in meaning from the homonym figuring in the Cartesian claim that non-ideational representations are incomplete. What does the latter attribution of incompleteness come to? That is the question.

The key preliminary index of the difference between the meanings of ‘incomplete’ is that when Descartes applies the term to an idea, he denies that the item represented by the (therefore) incomplete idea is itself incomplete in any non-incidental way. (Addressing the phrase ‘incomplete substance’ Descartes asserts of its denotata that ‘in so far as they are substances, they have no lack of completeness’ (*Replies* 4/99).) Though we remain in the dark as to what it is about ideational representation that guarantees the substantiality of ideata, we do know that ideata must be substantial. So we can be sure that what

Descartes was just quoted to say about ‘incomplete substances’ is a function of the view that ideas by nature are representative instruments capable of representing substances alone.¹

Whatever the incompleteness of an idea comes to, an incomplete idea isn’t then the idea of an incomplete object. But not all representations are ideas. In tandem with the ontological proposal of the preceding chapter, this fact suggests that an incomplete non-ideational representation *is* the representation of an incomplete object. So our question lends itself to the following reformulation: what semantic mechanism is such that the employment in picturing the world of a style of representation to which it is essential guarantees that the objects represented will be incomplete?

2. The anatomy of a self-misunderstanding

It’s a fact of interpretative life: the rightness of a question can often be verified only in light of the rightness of the answer provided for it. This is undeniably a case in point. It would be churlish to pretend that the question posed has clear reverberations in Descartes’ thinking. To commence, I will therefore take some steps to establish the question’s quality by working out a semantic thesis to which Descartes is implicitly committed. The mode of my effort will be diagnostic. Traversing some of the ground covered earlier from a different direction, I shall trace Descartes’ own failure to pose the question to a confusion under which he labours. This should silence critics who might otherwise persist in seeing my innovations as totally anachronistic.

Considerable energy was expended above to show that Descartes’ manifest presentation is pervasively misleading — a consequence of

1. After noting at IV.7 that Descartes appears to allow that some genuine ideata may be non-substantial modes, I claimed that the appearance is misleading. Since I will verify the claim in the coming chapter, I will permit myself to proceed here with the unencumbered thesis that ideata are substantial items; i.e. that the special account of ideational incompleteness is basic, and that the general account is subordinate to it.

the continuous use of epithets like 'obscure' and 'confused', 'vague' and 'inexact', to characterise the representations of the probable cogniser. Each of these terms, *in its pejorative content*, engages the relation between non-ideational representata and ideata proper, and Descartes' compositional practice thereby fosters the impression that the probable is a defective approximation to or variant of the certain. But if ideas and non-ideational representations are different species of (the genus) representation, this has no more legitimacy than the proposition that cats are defective dogs, or tables poor approximations to chairs. While the illicit suggestiveness is built right into Descartes' formulations, it is, however, incidental to his root thinking. I have shown, in an epistemological register, that the pejorative overtones can be filtered from the mentioned terms, leaving behind as a residue the thesis, which can therefore be interpreted and whose implications can be assessed independently, that the content of a probable conception of things (= non-ideational representata) differs from the content of an adequate conception (= ideata proper).

It is easily seen how Descartes could himself have been misled here by operating carelessly — as he admits to operating — with the term 'idea'. Had he employed 'representation' as a generic classifier and restricted 'idea' to representations which are clear and distinct, then the phrase 'unclear and indistinct idea' (or, with the aspersions reduced, 'incomplete idea', where 'incomplete' has its technical sense) would have been effectively proscribed. An idea on this improved taxonomy is 'clear and distinct' (or 'complete') by definition, and the phrase 'unclear and indistinct idea' is brother in logic to 'round square'. One who flits licentiously between a generic use of 'idea' and the preceding restricted use might easily have drawn the excessively strong conclusion that the condition of the subject who represents the world via what are carelessly described as 'incomplete ideas' is internally incoherent, and hence rationally insupportable on compelling logical grounds.

Due to his inconstant handling of the term 'idea', Descartes systematically misexpresses his core position. This is inconstancy, however, not inconsistency. Albeit with difficulty, we have extracted

the distinction between the technical and the non-technical senses of 'incomplete' from *his* texts. So since Descartes' own formulations contain a sharp distinction between what can properly be said of ideas and what can properly be said of non-ideational representations, it isn't in the nature of interpretational legerdemain to maintain that the misexpression can be rectified: a fictive Descartes will not be substituted in the process for the real one; rather, the real Descartes will emerge.

By exploiting the scholastic distinction, with which Descartes works, between the formal and the objective characteristics of a representation, a more forthrightly semantic form can now be eased onto the preceding points. 'When we consider ideas as modes of thought, we are considering their *formal* or *actual* properties; their objective properties are those that belong to them in virtue of their representative nature'.² Roughly, the formal characteristics of a representation are those which it possesses as an entity in its own right; by contrast, a representation's objective characteristics are the ones belonging to it *qua* instrument of representation.

Descartes' main application of the distinction, an application which has occasioned much trenchant criticism, is in connection with the first proof of God's existence. Given the proof's importance for his wider purposes, it is quite unconscionable — and even, in the event, more than a touch incomprehensible — that Descartes fails to say anything informative about what it is in an idea that establishes it as being the idea of such-and-such an object. Apart from stating that we have an idea of God (i.e. that God is 'objectively' in an idea we possess), and then appealing to the causal principle linking formal and objective reality in order to reach his result, Descartes is distressingly silent on the mechanics.

Partly to mark the fact that my interest in the formal/objective distinction is unconnected with the argument about God, thereby preventing the mentioned distress from prejudicing the discussion, and partly because of a desire to proceed in terms less archaic, I shall

2. Kenny, *Descartes: A Study of His Philosophy*, p. 131.

henceforth substitute a pair of words which are often used in place of Descartes' own, viz. 'inherent' and 'representative'.³

The relevant distinction is between those characteristics which a representation possesses qua object in its own right (= its inherent properties or features) and those characteristics which are semantically significant (= its representative properties or features). Clearly, the distinction is not an exclusive one. It seems obvious, for example, that the componential multiplicity of a sentence, an inherent characteristic thereof, is essential to its representing a complex state of affairs. So the mentioned inherent characteristic in this case will also play a representative role. By contrast, that a sentence is written in blue ink will generally be an exclusively inherent feature of it. Gassendi remarks on the overlap: '[the] objective reality [of the idea of me] can only be the representation of or likeness to me which the idea carries', and this is a function of 'that proportion in the disposition of its parts in virtue of which they recall me' (Objections 5/161).

A key point made above was that when 'idea' has its official sense, an idea is by definition clear and distinct. The implication for the distinction between inherent and representative features is plain: *obscurity and indistinctness cannot be representative ideational characteristics*. I will explain in a moment how, to judge from Descartes' own formulations, the truth of the implication is mismanaged. Because its truth is guaranteed by the way 'idea' has been defined, it would obviously be precipitate to read too much into or out of it. In effect, it is a trivial analyticity (or, for precision's sake, the proximate result of one). To assert that obscurity and indistinctness cannot be representative features of ideas is formally analogous to asserting that odd numbers cannot be divided by two without remainder. Just as this last truth doesn't show that there are no even numbers, so its predecessor fails to rule out the possibility of representations whose obscurity and indistinctness are representative characteristics. Also, of course, defining 'idea' as 'clear and distinct representative vehicle' is powerless to ensure that there will be any

3. See Kenny, *Descartes: A Study of His Philosophy*, p. 132.

ideas. By this I do not mean merely that had there been no cognising subjects there would have been no representative states whatever; *a fortiori* no ideas. I mean, rather, that even if cognising subjects exist and are active in representing the world, it remains an open question whether any of their representative states satisfy the *definiens*.

3. Incompleteness is a representative feature

At the close of IV.5 a condition was specified which we would like to meet in the course of interpreting Descartes' technical notion of incompleteness, viz. to explain why Descartes should have been so powerfully inclined to hold the technical incompleteness of a representative state to be an internal flaw in the condition of the probable cogniser as constantly to express himself in a fashion which suggests his critique of that condition to be immanent. Although we are still shy of an interpretation, an explanation, in terms of Descartes' inconstant handling of 'idea', is now in the offing. This precedence of explanation over interpretation is as it should be. Requested is an explanation of a Cartesian *misconception*; because the misconception's existence indicates Descartes' grip on the notion of incompleteness to be less than secure, the explanation should base itself on something less than the full interpretation.

So far as ideational representations proper are concerned — those representations entitling inference to truth as opposed to (mere) probability — obscurity and confusedness cannot, by definition, have representative status. Had Descartes consistently employed 'idea' to cover only the representations of a subject who has achieved certainty, syntax would have generated the conclusion that 'obscure idea' and kindred phrases are ill-formed. This would have forced the recognition that any representation so characterised cannot be an idea in the strict sense out into the open. But Descartes smudges the line between 'idea' in its official sense and in the generic sense attaching to it naturally due to the inertia of common parlance. Because Descartes holds that there are subjects — most of us most of the time: 'most men in life perceive nothing but in a confused way' (*Principles*

1.73/251) — whose beliefs are not certain, i.e. whose representative states are confused and obscure, he is therefore led to treat the mentioned features as non-representative features of ideas proper. He is led to this because (a) it follows from how 'idea' functions officially that no idea can be representatively confused, while (b) the failure to treat 'obscure idea' as a specific classifier whose members are disjoint from the members of the set of ideas proper obliges him to provide some ideational status for the confusedness in question. In the event, the only option here is the non-representative or inherent one.

This diagnosis has the great merit of explaining why Descartes continually misformulates the reference of the probable to the certain. More direct confirmation of its accuracy accrues by recurring to the example of the blurred picture. In many respects, Descartes handles 'obscure' and 'confused' just as the terms would be handled by one who is guided by such a picture, and it is difficult to believe that this is an accident. All would agree that blurredness cannot attach to an object pictured, its only possible status being as a feature of the picture described as blurred. In terms of the inherent/representative distinction: the blurredness of a blurred picture (like, to vary the example, the garbledness of a garbled message) would naturally be marked down as an inherent pictorial characteristic lacking representative status. Since this decision is ensured by the advance agreement that no pictured object could itself be blurred, one who transposes the blurredness from the picture to the object would commit a pitiable mistake. Along what certainly seems to be a parallel line of reasoning, Descartes treats obscurity and confusedness as non-representative ideational characteristics. Paralleling the preceding agreement that no object can be blurred, it is a Cartesian definitional truth (and hence Descartes can expect informed auditors to concur) that ideata cannot be confused or obscure.

Needless to repeat, the reasoning here is badly flawed. 'Blurred picture' is an inaccurate analogue of 'obscure idea'. Descartes' misformulations notwithstanding, he is aware of the inaccuracy at a deeper level. Agreement is readily secured that blurredness cannot be a representative pictorial characteristic. Were the parallel regarded by

him as accurate, Descartes would have thought himself justified automatically in assuming that the probable cogniser would admit that he is misrepresenting the world. The rigours of Descartes' actual argumentation suffice therefore by themselves to show that he doesn't finally reason along the mentioned lines.

While misleading, Descartes' presentation is therefore misleading with respect to his own considered views. The preceding diagnosis explains how he could have gone awry here. Once the distinction is enforced between the official sense of 'idea' and the sense attaching to it as a generic term, the textual difficulties vanish. The meaning-theoretic result of removing the difficulties can be exhibited in a single sentence, which can be reached by examining a faulty piece of syllogistic reasoning.

A theorist could argue soundly from 'No idea is representatively incomplete' via 'The ideas of the probable cogniser are incomplete' to 'The ideas of the probable cogniser are inherently incomplete' only if 'idea' appears univocally in the premises. But in the first premise 'idea' has its official meaning. (If 'idea' is construed generically in the premise, there is no reason to regard the assertion as true.) In the second premise 'idea' means 'non-ideational representation'. (If 'idea' is construed officially here, then the premise's subject phrase does not apply to anything.) And so, from the (dictionary) fact that no idea in the official sense could be representatively incomplete, nothing at all follows about the status of incompleteness *vis-à-vis* the inherent/representative distinction where non-ideational representations are in question.

In a single sentence, this then is the meaning-theoretic thesis to which Descartes is committed, and which is obscured in the texts by his systematic failure to employ 'idea' univocally: *incompleteness is a representative feature of non-ideational representations*. The failure propels Descartes from 'Obscurity is not a representative feature of an idea' to 'Obscurity is an inherent feature of an idea'. But the movement to which he is really committed is, rather, from 'Obscurity is not a representative feature of genuine ideas' via 'The representations of the non-scientist are obscure' to 'Obscurity is a

representative feature of the non-ideational representations of the non-scientific cogniser'.

On one occasion, we find Descartes actually making the mistaken move; though, as I have stated often enough, his immanent formulations of the referral of the probable to the certain exemplify the same error. To Gassendi's objection that '*my thought is not the rule of the truth of things*' (Letter to Clerselier concerning *Objections* 5/128), Descartes responds indignantly: 'it is the most absurd and extravagant error that a philosopher can commit, to wish to make judgements which have no relation to his perception of things' (ibid./129). However, Gassendi is surely innocent of the lunacy of maintaining that the determination of the nature of things can be accomplished without consulting one's perceptions. His claim is that the representative contents of one's workaday consciousness are inadequate to the state of things as pictured in Cartesian science. The only conceivable explanation of Descartes' hostile reaction — so apoplectic as to bespeak incomprehension — is that he is reading 'perception' as 'perception which isn't representatively confused', something he could have done only if he were dominated by the thought that confusion cannot be a representative feature of perception.

In addition to the ontological formulation of the character of Descartes' referral of the probable to the certain, we now have in hand a crude semantic description of that type of representation which figures in probable cognition. Ontologically: the probable conception of the world comprises objects which are not Cartesian substances, nor which bear a mereological relation to the latter. Semantically: the character of the probable mode of cognition is such that the objects represented thereby are, in the technical sense, incomplete: incompleteness is a representative characteristic of probable representations. The task before us is to link up these complementary formulations in a satisfactory way. What is representative incompleteness? What is the distinctive semantic mechanism (or mechanisms) of non-ideational representation? How does a subject's use of this mechanism (or mechanisms) ensure that his representata won't be Cartesian ideata?

4. *Berkeleian reflections*

Tackling the link will lead us onto analytic terrain, with an attendant distancing from the historical straight and narrow. To render the transition less abrupt than it might otherwise be, it is worth pausing for the space of a section to enlist some collateral historical support for the result just reached. Berkeley, whose position has in recent years increasingly been recognised as Cartesian in lineage and spirit, makes the crucial point that non-ideational representation is of a distinctive type, and makes it in a more direct fashion than Descartes. To be sure, the baldly-stated thesis that 'Berkeley...is an Irish Cartesian'⁴ cries for independent verification; the reader sceptical as to its truth would therefore have to be excused for viewing the parallel I see here with a cold eye. But since the preceding argumentation has been completed independently of any appeal to Berkeley, I can permit myself to assume a root community of doctrine, and leave the proof of the pudding very much to the eating.

Genuinely ideational incompleteness is mereological in character for Descartes. An identical thesis is expressed by Berkeley. 'I have a faculty of...representing...the ideas of those particular things I have perceived, and of variously compounding and dividing them. I can imagine a man with two heads; or the upper parts of a man joined to the body of a horse.... [But] it is...impossible for me to form the abstract idea of motion distinct from the body moving' (*Principles* Introduction. 10). If we construe 'incomplete idea' in the sense in which Berkeley isn't averse to the phrase, it emerges that he, just like Descartes, takes this attitude on condition that the idea so described represents a separable part of a wider whole — hence a part which can exist on its own, like the bodiless head of a man or a headless equine trunk.

The quotation indicates that where ideational representation is concerned Berkeley violently opposes abstractions. That his opposition echoes Cartesian strictures against 'incomplete ideas' is attested by the way Descartes explains the inadequacy (i.e. the

4. H.M. Bracken, *Berkeley* (London: Macmillan, 1974), p. 159.

incompleteness) of a cognition by appealing to 'intellectual abstraction'. Even without arguing that the correspondence is exact, the point of immediate interest can still be made with undiminished force.

Why does Descartes reject incomplete ideas? He does so, as I explained, because he denies that there can be incomplete ideata. Even though Descartes' reasoning here is impeccable, he hasn't made any move which forecloses on the possibility of incomplete representations which are not ideas. The suggested parallel between Berkeley and Descartes will thus be confirmed if the Irishman can be shown to grant that despite the cognising subject's inability to operate with abstract ideas (there being none) he can nevertheless cognise abstractly. Grant it he does: 'it must be acknowledged that a man may *consider* a figure merely as triangular; without attending to the particular qualities of the angles, or relations of the sides. *So far he may abstract*' (*Principles* Introduction. 16). Berkeley doesn't see the acknowledgement as endangering the all-important denial of abstract ideas, and in this he is perfectly correct since an idea is by definition a representation which discharges all abstractness. But Berkeley is nevertheless admitting a style of cognition, a mode of conceiving objects, which falls short of — or, better, which differs from — ideation in the strict sense.

For several reasons, Berkeley's formulation has a greater clarity than Descartes'. When describing the mode of cognition titled 'considering an object', Berkeley avoids using the term 'idea'. So there is no verbal pressure on him to deny that those features which show considering an object, qua mode of cognition, to be distinct from ideating an object in the strict sense are inherent as opposed to representative features of the instruments of considering. Descartes, I argued, should have formulated his views of inadequate cognition in precisely this way. Rather than putting 'A subject has an obscure idea of an object', he would have been much better advised to write 'A subject represents an object in a non-ideational fashion'. It is also clearer from the Berkeleian context why the frank admission of a non-ideational mode of cognition is not regarded as a source of insuperable difficulty (though I would maintain that the difficulty is